

**MARKETS, MARKETING BOARDS,
AND COOPERATIVES IN AFRICA
ISSUES IN ADJUSTMENT POLICY**

UMA LELE · ROBERT E. CHRISTIANSEN

**MANAGING
AGRICULTURAL
DEVELOPMENT
IN
AFRICA**



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FOREWORD

The MADIA study and the papers comprising this MADIA Discussion Paper Series are important both for their content and the process of diagnosis and analysis that was used in the conduct of the study. The MADIA research project has been consultative, nonideological, and based on the collection and analysis of a substantial amount of concrete information on specific topics to draw policy lessons; it represents a unique blend of country-oriented analysis with a cross-country perspective. The conclusions of the studies emphasize the fundamental importance of a sound macroeconomic environment for ensuring the broad-based development of agriculture, and at the same time stress the need for achieving several difficult balances: among macroeconomic, sectoral, and location-specific factors that determine the growth of agricultural output; between the development of food and export crops; and between the immediate impact and long-run development of human and institutional capital. The papers also highlight the complementarity of and the need to maintain a balance between the private and public sectors; and further the need to recognize that both price and nonprice incentives are critical to achieving sustainable growth in output.

The findings of the MADIA study presented in the papers were discussed at a symposium of senior African and donor policymakers and analysts funded by USAID in June 1989 at Annapolis, Maryland. The participants recommended that donors and African governments should move expeditiously to implement many of the study's valuable lessons. The symposium also concluded that the process used in carrying out the MADIA study must continue if a stronger, more effective consensus among donors and governments is to be achieved on the ways to proceed in resuming broad-based growth in African agriculture. The World Bank is committed to assisting African countries in developing long-term strategies of agricultural development and in translating the MADIA findings into the Bank's operational programs.

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MADIA DISCUSSION PAPER 11

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Introduction

The structural adjustment efforts under way since the early 1980s have emphasized the liberalization of agricultural prices and markets and have led to a vigorous debate about the appropriate roles of the private and public sectors. Among the issues raised in this debate are the nature and causes of the weaknesses in public-sector marketing activities that have dominated agriculture, the types of public sector interventions in pricing and marketing that may be justified (including whether to tax export-crop production and to stabilize producer or consumer prices), their effects on efficiency or equity in production and consumption, and the cost of such interventions relative to alternative means of achieving the same objectives. Advocates of market liberalization argue that the failure of public marketing institutions to operate efficiently is evidence of the need to privatize a wide range of marketing activities and to press the public parastatals that may remain to undertake solely profit-making activities. Those who support some forms of interventions ask for evidence on the causes of parastatal losses and point to the need to perform certain inherently loss-making but socially desirable functions. They also point to the absence of markets for risks or information in support of their argument.

The role of cooperatives is also raised frequently in the context of examining appropriate marketing institutions and arrangements. In the 1960s, many newly independent governments as well as donors promoted cooperatives as a potential source of decentralized grassroots participation in agricultural credit, input, and commodity markets. As cooperatives began to gain political and economic power, however, governments often perceived them as a threat to their own central political control. In response, governments sought to increase their control of cooperatives and, in so doing, undermined their effectiveness. By the 1970s, most cooperatives had become state-dominated entities that did not represent the interests of their membership—especially not of the small-scale farmers. Despite this experience in the adjustment dialogue, cooperatives have come to be regarded by donors as a "middle ground" between the roles of the public and private sectors. Governments are under pressure to abandon the single channel public marketing network, yet they are fearful of losing control of politically and economically important functions. They see cooperatives as a more acceptable alternative than privat-

ization. Donor agencies, on the other hand, seek increased private-sector marketing but, facing government resistance to privatization, envision cooperatives as a reasonable "private" sector alternative to parastatals. Perhaps the most interesting aspect of these different views is that neither party seems to take account of the experience of earlier efforts to promote cooperatives—i.e., the fundamental importance of a limited role for the state in organizing and supporting cooperatives and of genuine grassroots participation, and the problems caused by the desire of governments to control cooperatives to keep political power centralized and to use them as a means of patronage distribution.

Thus economic decentralization sought by donors through the use of market mechanisms cannot be seen in isolation of the ensuing distribution of political power. Finally, the conditions needed for the private sector to operate efficiently, including free entry, information, and factor mobility, access to credit and transport of private traders and small producers must also be considered. The paper documents that it is not so much the principle of privatization as the sequencing, phasing, and pace of privatization and price liberalization that have been the problematic issues. Donors—who indiscriminately supported the growth of the public sector in the 1970s—have not shown adequate appreciation of the preconditions necessary for the private sector to operate competitively or of the steps needed to be taken by the public sector to ensure the competitiveness of the private sector.

To illustrate these points and to explore their policy implications, the paper examines the causes of state intervention prior to independence as well as post-independence experience with marketing parastatals and cooperatives in Cameroon, Kenya, Malawi, Nigeria, Senegal, and Tanzania.¹ This analysis is followed by an overview of the content and outcomes of the marketing and pricing liberalization programs.

The focus is on the pricing and marketing of *traditional* export and food crops, which in the six MADIA countries constitute well over 90 percent of the area harvested, value added, and employment created in agriculture. The paper is not concerned with dairy, livestock, or horticultural crops—areas in which government intervention has been less obtrusive and in which the private sector has played an important role.

The Genesis and Evolution of Intervention in Agricultural Marketing

Agricultural Marketing at Independence

Many of the restrictive practices that characterize agricultural marketing in the MADIA countries have their origins in the structure of the agricultural sector during the colonial era. The evolution of these practices reflected a prejudice against the trading function in general and was influenced by economic relationships between classes and the public sector's need for revenues (neither of which factors was unique to Africa). Thus Bauer referring to the Nowell Commission's investigation of agricultural marketing in West Africa, noted that:

The Commission criticized the seemingly chaotic and unorganized system of marketing; and the collective marketing agencies which it proposed had the appearance of simplicity, efficiency and neatness. Moreover, the establishment of such agencies would result in the creation of large-scale organizations and of important official positions (Bauer 1967, p.265).

In part, this preference for "organized" marketing stemmed from a misunderstanding of the operation of markets. Again, Bauer referred to the observations of many colonial administrators in Nigeria and Ghana:

The number and variety of intermediaries have been much criticized by official and unofficial observers. They are condemned as wasteful and are said to be responsible for wide distributive margins both in the sale of merchandise and the purchase of produce (Bauer 1967, p.22).²

Although an explanation based on the desire to achieve order and efficiency had appeal at one level, it is also clear that marketing restrictions were used extensively during the colonial period to create economic rents through trade. In West Africa, the diversity and small-scale nature of food-crop trade, combined with the large number of producers, made it difficult to control or regulate. Consequently, marketing boards were confined to export crops—an area that European trading companies dominated (Harriss 1981). Thus, agricultural parastatals in West Africa were created to gain control of the acquisition and distribution of agricultural (primarily export) products—some argue at the expense of the producers (Keene, Monk, and Associates, Inc. 1984, p.i). In her review of West African trade, however, Harriss observes that investments in marketing and transport infrastructure prior to the Second World War had the result of encouraging domestic agricultural production even though they were undertaken primarily in the interest of European trading companies. The establishment of some of the West African marketing boards was also motivated by declining world market prices for export crops and by the growing distrust of private trading companies by African producers. The internally inconsistent objectives emanating from the desire of the British government to maintain popular support for colonial regimes and to mobilize revenues during the war thus played a part (Harriss 1981, pp. 23-24).

In East Africa as well, the structure of European economic interests determined the nature of government intervention in marketing. Colonial agriculture was divided into estate and smallholder subsectors. The restrictions imposed on production of export crops by smallholders,

who were relatively more efficient (Lele and Agarwal 1989), enabled European farmers to maintain a monopoly on production of such crops as tea and coffee in Kenya. Lele and Agarwal (1989) have shown how postcolonial policies with regard to smallholders and large-scale African producers who replaced European farmers have varied between Kenya and Malawi. During the colonial period, marketing boards in Kenya emerged only in the areas where European production was dominant. Bates (1989) argues that although the efforts of European farmers to gain an economic advantage over African farmers in Kenya took several forms, one of the most durable was the operation of agricultural boards or parastatals, e.g., the Land and Agriculture Bank, the Wheat Board, the Maize Board, the Coffee Board, and the Kenya Cooperative Creameries, each of which were formed at the initiative of large-scale farmers and designed to enhance the profitability of production. Bates cites the Maize Board as representative of this phenomenon.

The basic instrument of their efforts was the Kenya Farmers' Association (KFA), an organization first formed in the 1912/13 crop year to dispose of the maize crop. The main obstacle to securing a high price for the maize crop was competition. Particularly troublesome were the small-scale African producers Without the regulatory power of the state, there was little the KFA could do to compel cooperation by its members, much less to restrict sales by non-members, and thereby secure higher prices (Bates 1989, pp. 16-17).

To ensure food supplies during the Second World War, the Kenyan government sought to guarantee the profitability of food production by empowering the KFA to act as an agent of the government with power to regulate the movement of produce and product prices. The KFA took charge of maize production, storage, and transport on behalf of the government's maize board. The association formed by the large-scale farmers was thus legally accorded monopsony powers and it was mandated to secure prices high enough to guarantee a good profit to its members. In the case of Kenya, therefore, it can be observed with some irony that "the dominance of the colonial state meant that, when independence came, the government of Kenya was endowed with public institutions for the promotion and regulation of agriculture that were unusually rich and sophisticated" (Bates 1989, p. 22).

Certainly this long history of state intervention (Harriss 1981, p.15), the African governments' perceptions of the "success" of public-sector marketing institutions to foster commercial agricultural production, their ability to mobilize resources to maintain operations of the colonial governments, their desire to maintain control over the marketing of politically strategic commodities such as maize, and doubts about the efficacy of the traditional private sector in conducting organized trade all contributed to the postindependence prejudice against private trade and to the continuation of public control and regulation. This predilection for state-dominated marketing structures manifested itself in each of the MADIA countries.

Growth of Marketing Parastatals in the Postcolonial Period

Although the growth of public-sector marketing in the 1970s had obvious appeal for governments in extending their control as well as benefits to larger segments of the economy and society, it could not have been accomplished on such a scale without significant donor support. Between 1970 and 1987, the value of external assistance constituted between 35 percent and 70 percent of government expenditures in MADIA countries (Lele and Jain 1989). In general, Tanzania and Senegal, the countries that received the most foreign assistance, were also those with the greatest growth of parastatals. In Tanzania, nearly 400 parastatals handled production, processing, transport, and marketing of goods and services by the end of the 1970s; and the prices of nearly 1,000 commodities were controlled. A recent World Bank report documents that, over the period 1974-1985, Sub-Saharan Africa received more World Bank support for parastatals than either Asia or Latin America, involving some 48 food-crop projects, 45 export-crop projects, and 17 livestock projects in Africa that had some marketing components (World Bank 1988, p. 11).

The concern of donors about these parastatals in the course of liberalization in the 1980s must thus be viewed in the context of the vested interests donors helped to create. In many ways, the aid community tended to accept the parastatal structures for the same reasons that they appealed to governments—they were easier to work with than the private sector because they were controllable and limited in number. As the World Bank's review observes:

Parastatal projects were easy to design and appraise. They often had a legal monopoly of trade, so that assistance was clearly being provided to the only organization available—and one that was approved and supported by government. Centralized decision making meant that the principles governing the project could be sorted out fairly easily with the responsible manager, and ties to a parent ministry meant that the government's endorsement of the appraisal design could be readily obtained (World Bank 1988, p.iii).

Parastatals also seemed able to complete tasks that the indigenous private sector could not, given the stage of Africa's development. The weakness of the local private sector combined with the clear unwillingness of African governments to let non-indigenous communities (i.e., Indians in East Africa and Lebanese in Senegal) achieve a prominent position in politically sensitive or economically powerful arenas worked in favor of parastatals. Because the promotion of parastatal operations was the focus of policy, the steps needed to develop the legal and institutional framework (e.g., free entry, information, and mobility) essential for the development of competitive markets were rarely taken (Lele 1989b). It takes time to create these conditions. Although it requires relatively little financing on the part of donors, it does require a substantial micro-level knowledge of the political, sociocultural, technological, infrastructure and financial circumstances to intervene effectively to create conditions in which the private sector can operate competitively. Unfortunately, such knowledge is frequently inadequate among donor staff, who have tended to dominate the design of projects in circumstances of limited internal African capacity for planning and implementation, and who by-and-large have experience in the

public sector. Donor staff also operate from distant headquarters in developed countries rather than on the basis of insights developed from prolonged field experience in the countries which they assist.

Again, the World Bank review offers interesting insights:

...there has never been an explicit Bank policy either in favor of or against parastatal organizations, it is evident that a marked change has occurred in the way these organizations are regarded. In the late 1960s and 1970s, parastatals, many of them inherited from the colonial powers, were accepted fairly uncritically. Where deficiencies of hardware or management were identified, appraisal missions typically concluded that these could be remedied by project investments or by the introduction of technical assistance personnel at strategic points (World Bank 1988, p. iii).

Privatization programs also need to identify clearly who the likely actors and beneficiaries are, and what the sociopolitical and employment implications of privatization will be vis-a-vis the activities of the indigenous population, the public sector, etc.—and precisely how much efficiency gain can be expected over what time period. These often are not articulated explicitly, and their implications for the pacing of privatization policy are not adequately considered. For example, the promotion of nonindigenous traders such as the Indians and the Lebanese and enterprising local ethnic groups (e.g., the Kikuyu, the Chaga, the Ibo, or the Bamileke) who are already relatively more dominant commercially are often unacceptable to governments on political grounds. Relatedly, governments feel the political need to *develop* entrepreneurial talent among those indigenous ethnic groups that have had less exposure to the commercial economy. Due to the political sensitivity of the racial and ethnic dimensions of privatization these are rarely discussed in policy dialogue. Similarly, it is important to distinguish between the small-scale "market women," and the handful of large-scale indigenous traders or military officials, and the external multinational corporations that might be the beneficiaries of privatization and might exercise monopoly power. The internal growth linkages, employment, and income distribution effects of the participation of the large-scale oligopolistic operators may well be quite different from those involving a large number of small actors.

Finally, taxation of agriculture was explicitly encouraged by donors and external policy advisors until the early 1970s in recognition of the need to mobilize public-sector revenues to modernize and industrialize economies (Lele and Jain 1989). Given the perceived inelastic demand for primary commodity exports, taxing agriculture to modernize and diversify economies was considered to be the logical approach. Export pessimism even led donors (together with the recipient African governments) to shift their own investment resources and policy attention away from export crops toward food production, and toward industrialization in a period when foreign aid was rising. Moreover, the 1973-74 food crisis focused attention on food shortages and reinforced the anti-export crop bias. Only in Kenya and in estate agriculture in Malawi did this export pessimism not lead to explicit or implicit taxation of agriculture, with the result that both countries experienced sustained growth in the production of export crops (Lele 1989a). Malawi, Cameroon, and Senegal taxed smallholders explicitly through low producer prices for tobacco, coffee, and

groundnuts, while Nigeria and Tanzania did so implicitly through overvaluation of currency—all with adverse effects on export production (see Table 1). By the late 1970s, Nigeria and Tanzania had begun to provide budgetary subsidies to export crop parastatals as a means of compensating for the export taxes obtained through currency overvaluation, but these remedies did not fully redress the deleterious effects of currency overvaluation.

A fact that is frequently overlooked, however, is that while export agriculture was taxed, food crop operations were often highly subsidized through price stabilization operations and fertilizer subsidies. Thus when resource transfers to and out of agriculture for both food and export crops are considered, in most MADIA countries there was no net taxation of agriculture. For instance, in East Africa in the early 1980s, the losses or overdue payments of the grain-marketing operations alone amounted to 5 billion shillings in Kenya and 2.8 billion shillings in Tanzania. These costs of maize operations were substantially larger than the revenues that governments extracted from export agriculture in either of these countries (Lele 1989a, p. 138). Similarly, while the government of Malawi taxed smallholder tobacco it subsidized smallholder maize and fertilizer. In West Africa too, fertilizer subsidies provided through the public sector in Nigeria reached 1 billion naira annually in 1987. Finally, public-sector investments were also made in large-scale irrigation for food crops through River Development Basin Authorities in Nigeria and through various parastatals in Senegal (SAED) and Cameroon (SEMRY). Each of these had a public-sector marketing component, and their operations were subsidized by governments and supported by donors. For instance, donors supported rice irrigation schemes—in part due to the high prices of rice projected in the 1970s, and in part to support the sociopolitical objectives governments pursued in remote northern parts of West African countries

on grounds of income distribution. Rice prices have since fallen, and the economic viability of many previously funded schemes has come into question, although donor financing for them has not necessarily stopped. Several conclusions emerge from this situation. First, the role of donors in facilitating distortions in African agriculture must not be overlooked given the large share of government expenditures that are financed by external aid. Second, it is not so much the quantity of public expenditures on agriculture in Africa that has been inadequate as their quality and allocation among regions and crops, between capital and recurrent expenditures, between physical infrastructure and communications vis-a-vis that devoted to increasing public sector employment in parastatals, etc.

The Economics of Market Intervention

Risk in agriculture

Some of the most influential agricultural economists involved in formulating U.S. policy for the modernization of its agriculture in the 1940s justified price intervention on the ground that risks in agriculture are greater than in other sectors.³ Much like their European counterparts working in colonial Africa, they considered the assurance of a guaranteed market essential if farmers were to invest in modern purchased inputs. More recently, the private-sector oriented International Finance Corporation (IFC)—in a report examining the reasons for the weak performance of the agricultural production schemes that it has funded—similarly ventures an observation that there is a need for IFC to recognize that uncertainty is much more important in agriculture than in industry. Production and prices vary over a much wider range, and often both move in the same direction" (IFC 1989, p.vi).

Rainfed agriculture in Africa of course tends to be far riskier than the irrigated agriculture practiced widely in Asia. Furthermore, information regarding the likely failure of

Table 1
Ratio of producer to international prices, 1970-86 (calculated at nominal exchange rates)

Year	Kenya		Malawi			Tanzania		
	Smallholder		Smallholder Dark-Fired	Estate		Smallholder		
	Coffee	Tea		Burley	Flue-Cured	Tobacco	Cotton	Coffee
1970	0.91	0.60	0.22	0.4	0.57	0.43	0.72	
1971	0.90	0.67	0.25	0.39	0.68	0.50	0.61	
1972	0.98	0.63	0.23	0.40	0.63	0.46	0.57	0.57
1973	0.96	0.60	0.22	0.54	0.86	0.44	0.35	0.43
1974	0.97	0.55	0.23	0.62	0.84	0.42	0.32	0.43
1975	1.01	0.63	0.22	0.47	0.66	0.47	0.51	0.36
1976	0.85	0.57	0.21	0.48	0.70	0.40	0.41	0.30
1977	0.92	0.70	0.26	0.60	0.76	0.42	0.45	0.35
1978	0.94	0.64	0.26	0.50	0.74	0.47	0.55	0.39
1979	0.93	0.66	0.24	0.45	0.65	0.37	0.51	0.29
1980	0.98	0.76	0.23	0.46	0.40	0.35	0.52	0.41
1981	0.84	0.62	0.19	0.73	0.56	0.33	0.61	0.53
1982	0.83	0.56	0.24	0.51	0.50	0.30	0.73	0.52
1983	0.90	0.98	0.23	0.27	0.39	0.38	0.67	0.47
1984	0.80	0.66	0.25	0.30	0.38	0.27	0.65	0.47
1985	0.88	0.76	0.21	0.26	0.34	0.36	1.07	0.53
1986	0.79	0.69	0.22	0.43	0.45	0.32	1.11	0.33

Sources:

International prices from World Bank BESD, Commodity Statistics, for Coffee: "Other Mild Arabica"; Tea: "Average Auction (London)"; Tobacco: "United States All Markets"; Cotton: "Egypt (Liverpool)"; Groundnuts: "Nigerian (London)." Nominal exchange rates from IMF 1987. Producer prices for Kenya: Ministry of Agriculture 1987; Malawi: tobacco prices from Government of Malawi 1988, cotton (grade A) from World Bank 1986a, groundnuts (1970-77) from World Bank 1981 and (1978-86) from Government of Malawi 1988; Tanzania: World Bank 1986b.

rains is poorer in Africa than elsewhere, as the development of early warning systems is still at an earlier stage (Lele 1985). Yet improvement of early warning and production information systems has not received the high priority it deserves in donor support of agricultural sectors in Africa. Not surprisingly, weather-induced risks are frequently correlated with policy-induced risks. For example, domestic food crop failures lead governments to increase commercial or aid-related food imports at short notice,⁴ and their public distribution to remote areas involves high transport costs. Such import and distribution tends to be undertaken by public sector marketing parastatals rather than left to the private sector lest all imported commodities be sold in urban areas of population concentration. Moreover, high-income public sector entities often are not reimbursed by governments for these distribution costs, although governments typically earn revenues on the food aid they receive. In years of internal supply abundance, which is also a frequent occurrence, marketing parastatals are faced with either defending a market price (which in turn leads to substantial losses from ensuring year-to-year storage) or to exports. Alternatively, letting the market operate in a period of supply abundance—a step that many marketing boards adopt out of necessity dictated by the shortage of working capital—results in the collapse of the market price and farmer confidence, as in Kenya (Pinckney 1986).

Risks confronted in rainfed agricultural production can be divided into those associated with variability in yields and the resulting production instability, and those resulting from variability in prices. Since market prices and yields should normally move inversely, they should lead to stable incomes. However, as the above-mentioned IFC report observes, this does not always occur; both agricultural supply and demand tend to be highly inelastic in the short run, and futures markets do not exist. Besides, under conditions of subsistence agriculture, where only a small proportion of the total food production is marketed, fluctuations in marketed production tend to be proportionately greater than those in overall production—i.e., the elasticity of marketed surpluses with respect to food production tends to be greater than one. Thus, in the absence of some price support, a given increase in marketed surplus will in all likelihood result in a greater than proportionate drop in market prices, especially in situations of poor infrastructure (e.g., feeder and trunk roads, and railways) as well as lack of information, credit, transportation, and storage facilities. A joint MADIA-SSATP study on the role of rural roads emphasizes the problems created by the poor planning and inadequate maintenance of rural roads in the MADIA countries. A sharp drop in production tends to result in proportionately greater drop in marketed output and price increases unless stocks can be released to bring prices down or the need for imports is anticipated in a timely manner. Thus, in absence of an effective early warning system, a government planning mechanism that ensures adequate imports (although informal border trade may operate), and without some minimum support for prices as *one* element of a larger modernization strategy, it is unlikely that modernization of agriculture will occur.

An important research question is the extent to which the private sector undertakes year-to-year stocking, which can reduce the need for public-sector storage and thus minimize the cost of government interventions (Lele and Candler, 1989). There is virtually no empirical literature on

Africa that provides quantitative information on crop storage behaviour between seasons of rural households, wholesalers, retailers, or rural communities. Pinckney's work on Kenya—the only exception to this general rule—suggests that such storage might be significant. However, other evidence suggests that private year-to-year storage may be limited (even where price interventions do not discourage such activity) because of the high costs of storage (a minimum of up to 20-25 percent of the value of output), the risk that price increases the following year will not cover storage costs (especially given the opportunity cost of relatively scarce working capital), and the resources required to meet day-to-day survival needs in rainfed agriculture, where savings may be relatively limited. There has been relatively little donor support for the improvement of storage by rural households and the rural trading sectors prior to introducing market liberalization—reflecting the poor sequencing and phasing of market reforms. In any case, whether private traders will undertake storage on a scale necessary to alleviate the supply shortfalls encountered by a large share of urban and rural households in years of shortages is an issue that needs empirical investigation.

International trade can of course reduce the need for internal stocks, and it is frequently argued by donors that African governments have tended to be unwilling to pursue an outward-oriented trade policy. However, if trade orientation is considered in terms of the proportion of GNP originating in that sector, most small African countries have high proportions in trade (with exports and imports constituting between 40 to 60 percent of GNP). Besides, food imports have constituted a larger share of total imports and internal food needs than in some of the larger Asian countries, for example India and Indonesia—even compared to the period prior to Asia's Green Revolution, when the susceptibility of Asian countries to droughts and food shortages was significant. India imported only 10 percent of its total grain consumption in the mid-1960s, and virtually all of those imports were financed by food aid. In Tanzania and Senegal, in contrast, food imports in some years have constituted up to 40 percent of export earnings. In Africa as a whole, even though food aid has been rising rapidly, commercial food imports nevertheless have accounted for 60 percent of the total food imports in the mid-1980s.

At the same time, the capacity of African countries to finance such growing food imports has been decreasing due to the neglect of export sectors by governments and donors alike. Since the mid 1970s both have focused on a narrow conception of food security—one largely involving food production efforts in the areas of limited demonstrated potential and without a consistent strategy. Even in the case of countries with a relatively successful record on exports (e.g. Kenya), whose ability to finance food imports has been relatively stronger, importing has been unreliable, given the dependence of these countries on the availability of scarce foreign exchange.

Yet food aid is equally unreliable—even when available. Improved early warning systems to detect potential food shortages, increased internal production of food, and easier access to financing for food imports (as for instance, through a more liberal access to the IMF food facility, and a more reliable and predictable availability of food aid) may encourage liberalization of grain markets by increasing the sense of security governments enjoy with regard to food

availability in the countries. Some year-to-year price and supply stabilization is likely to be necessary—together with a policy of international trade, and the encouragement of storage by households and traders as a means to address the problems of glut and shortages. Donors must thus consider not only the principle of privatization, but its pace and pattern, as well as its role relative to public stocks and international trade at early stages of economic development.

Controls over interdistrict movements are another symptom of government insecurity—linked to their inability to command surpluses in the public sector in periods of shortages to influence market prices and ensure supplies. Command of internal production for public distribution has a high political value, as grains supplied under food aid often are not an adequate substitute for domestic consumption due to strong consumer preference for local crops (e.g., the white maize in Kenya, the flint maizes in Malawi, etc.) although the urban consumers are of course not by any means the poorest segments of the population. The political cost governments perceive in not being able to ensure the basic staple foods to such urban populations tends to be higher than economists assume; it is strong enough to lead governments to measures to control supplies in the public sector. Restrictions on interdistrict movements of grain facilitate such control by depressing prices in the areas of surpluses, although, of course, such restrictions tend to make markets less integrated than they would otherwise be. Markets become more integrated when movement restrictions are removed. However spatially integrated they are, markets do not necessarily ensure price stability in the face of unstable supplies and inelastic demand referred to earlier. However, since free trade does not ensure the ability of governments to command grain at reasonable prices in poor crop years, maintenance of an adequate buffer stock may be a crucial incentive to encourage governments to liberalize markets. In this context, it is noteworthy that in India liberalization of the internal grain trade occurred *after* the Green Revolution—once the government was secure about its ability to command adequate stocks in the public sector to exercise influence on market supplies and prices even in poor crop years. Grain market liberalization was not the cause of India's Green Revolution (Lele 1973). In reforming policy the complex interactions among production, stocks, and trade must be more fully appreciated.

Instability in export agriculture

Whereas instability in food crop prices by and large reflects changes in domestic supply (although in countries such as Nigeria, erratic imports of rice have also caused considerable price fluctuations), that of export crop prices is externally induced. Elsewhere, the MADIA study has demonstrated the considerable instability of international market prices for primary commodities (Lele 1985), as well as the need to make a distinction between perennial export crops of relatively high value (i.e., tea, coffee, and cocoa), and annual food and export crops. In the case of perennial export crops, domestic production may be profitable, when internal prices are not distorted, even at the lowest level of international prices. In the case of annual export crops of comparatively lower value (i.e., cotton, groundnuts, and tobacco), however, price competition from domestic food crops may be severe—especially in circumstances of growing internal demand for food. In the

latter case, instability in the production of food crops and in food prices may cause a substantial and proportionately greater instability in the production of annual export crops of low value through an acreage response—since the area under export crops typically tends to be smaller in relation to that under competing staple food crops (see Raj Krishna in Southworth and Johnston 1967). The MADIA study has also stressed the need to distinguish between crops that do and do not require further processing. The former must provide a stable supply of raw materials to domestic industries to preclude losses by the processors through underutilization of capacity caused by production fluctuations leading to higher processing margins and lower producer prices.

Because the structure of export crop marketing requires some vertical integration and offers fewer opportunities to producers for alternative selling arrangements, owners of processing operations may have more control over producer prices for export crops than in the case of crops for domestic consumption.⁵ There has been a tendency to object to taxation of agriculture without separating out the issue of price stabilization. A high level of taxation should be opposed, but year-to-year price stabilization at close-to-border prices may be necessary. At times, governments have also tended to cross-subsidize food crop operations by taxing export crops. For instance, Malawi has supported smallholder maize operations by taxing *smallholder* tobacco production while it has left estate production of tobacco virtually untaxed (Lele 1989b). Whereas donors have criticized Malawi's subsidization of maize prices, they have objected less to its discriminatory policy of taxation of tobacco, which makes some compensatory relief on food prices necessary.

Price stabilization

Whereas Keynes (like the U.S. agricultural economists, European settlers in Africa, and the IFC) considered wide and rapid fluctuations in the world prices of primary commodities to be "one of the greatest evils in international trade" (Kanbur 1985), recent theoretical literature questions the need for price stability from the viewpoints of both consumers and producers. According to Newbery and Stiglitz (1981), stabilizing prices may increase income variability. We have shown above, however, why this may not always be the case in developing countries. They also argue that long-run effects of stabilization may be opposite to short-run effects, e.g., price stabilization may encourage production of the commodity to a point where in the long run income decreases, rather than leading to a diversified production strategy which reduces the risks of price variability. They also emphasize, and Behrman concurs, that the distributive and efficiency effects of price stabilization need to be distinguished and that policies to stabilize consumption and income or to improve financial and futures' (commodity) markets may be more desirable than those to stabilize prices (Behrman 1987). Others argue that instability in earnings due to instability in volumes may be greater than instability in earnings due to prices (Wahab 1985).

Gains to consumers and producers from price instability depend on the relative magnitudes of the supply and demand variances, assumptions about the benefits of risk reduction, and log-linearity and multiplicativity of disturbances (Gilbert 1986, p. 635). Although some literature concludes that gains to consumers from price stabilization

may be positive, questions remain as to the size of gains to producers. Furthermore, the cost of holding the necessary stocks is believed to exceed the benefits in the form of more stable prices.

Despite these theoretical considerations, why do governments like to stabilize producer and consumer prices? Virtually every European, North American, and Asian country that has successfully modernized its agriculture has guaranteed a minimum producer price for major commodities as a means to reduce risks in the adoption of modern technology—a factor not adequately considered in the theoretical literature. However, as the theoretical literature notes, many countries suffer from high budgetary costs of producer price support programs that have become difficult to eliminate because of the producer lobbies developed around them. This leads to greater allocation of resources to the agricultural sector than market forces would warrant—the agricultural surpluses in the EC and the United States being examples. The equity effects of these programs are also less desirable than originally believed. In the United States, for instance, large corporate producers of agricultural production tend to benefit more from price supports and quotas than their smaller family-farm counterparts because benefits tend to be proportional to the size of operations. Moreover, technological change tends to become institutionalized in areas of greater profits and lower risks made possible by support programs, tending to perpetuate production increases.

Nevertheless there are several reasons why stabilization remains popular with governments. First, short and medium term effects are of greater interest to them than the likely long-term adverse effects on resource allocation. Second, forward markets take time to develop and are not a practical way to deal with risk for countries at early stages of development. And finally, transport and capital markets are still poorly developed.

This being said, even in the African context, efficiency of price interventions must be weighed against the costs and benefits of achieving the same objectives by other means—e.g., by improvement in the transportation network, information systems, and increased access to credit by small farmers and traders—that can increase the competitiveness of private trade.

To the extent that some price stabilization may be attempted, ways must be found to increase cost effectiveness of these operations—for example, by increasing the range within which prices are stabilized rather than having a fixed producer and consumer price, combining minimum stocks with trade (as done by Indonesia), and ensuring that surplus profits skimmed off by stabilization schemes are protected for use in the period of low prices by increasing the control that producers rather than governments exercise on the use of stabilization funds.

With respect to *low-income* consumers, the case for price stabilization tends to be stronger, in part because the ability of governments to organize alternative means of stabilizing producer *income* tends to be limited—even though low-income producers themselves diversify their production and income among food and export crops, livestock, and non-agricultural activities. They also use other means of risk minimization including late planting of crops, production of drought resistant crops, mixed cropping, etc. The lowest income consumers spend up to 60 percent or more of their income on food. Negative income effects of food price increases are greater for these low-income

groups than for their high-income counterparts because the former spend proportionately more of their expenditures on food. This is true even in rural areas. Small producers already tend to give high priority to meeting household food requirements through their own production and income strategies e.g., by opting for stable but lower yields on food crops through mixed cropping, varying planting dates (including "late" planting) to reduce crop failure, stressing the production of drought-resistant crops, mixing livestock with cropping, and earning some off-farm income. Where export crops enable producers to be sure of higher and more stable income, however, as in the case of tea and coffee in Kenya or cotton in West Africa, they tend to allocate a significant share of their acreage to higher-value crops. Despite the adoption of these strategies, the various MADIA papers document the growing dependence of rural households on the market for food purchases out of necessity rather than choice, as population pressure is tending to reduce the area under cultivation (Lele 1989; Lele and Stone 1989). In such situations, price stabilization is also a means of stabilizing income on welfare grounds, and governments will continue to control prices on welfare and political grounds—as has been the case in East Africa through parastatals and in West Africa through trade policy toward rice.

Scale of investments

Marketing and processing of export crops involve scale economies and frequently require lumpy investments in processing facilities, transport, and communications. In many African countries, political leaders (e.g., Malawi's President Banda) often became the entrepreneurs, so there was not an adequate entrepreneurial class with the necessary capital to undertake such operations. Although the entrepreneurial class is broader now than previously, there are major differences among countries—e.g., between Malawi and Nigeria. Even in Nigeria, however, it is not clear why there is not more private investment in modernizing the processing of oil palm, or in road maintenance capacity.

There is abundant evidence to suggest that infrastructural investments facilitate the development of markets by improving factor mobility and market information and by reducing transportation costs and risks. Despite the benefits of transport infrastructure, however, underinvestment, especially in *maintenance*, has been characteristic of many of the countries because (i) the benefits are long-term and difficult to measure; (ii) the links between market development and transport networks are not fully understood; and (iii) the concentration of power in central governments means that local governments do not have the administrative and financial capacity to maintain roads (Lele, Oyejide, et al. 1989). Public-sector investment is urgently needed in transport, electrification, and communication.

Inadequacy of financial markets

The inadequate development of capital markets poses a major constraint on intensifying production. Covariance of risk over large geographical regions with uncertain rainfall increases the risks of default on repayment and reduces the scope for development of private financial markets in many parts of semiarid regions—especially because savings tend to be low in situations of low average labor productivity. A shortage of cash at critical periods is a constraint in purchasing fertilizers and hiring additional labor for land preparation, weeding, and harvesting. Unlike Asia, where informal rural financial markets provide up to 60-70 percent

of rural finance, interseasonal capital transfers among households to facilitate input purchases are less developed in Africa. Reflecting the shortage of capital, many recent field studies report very high real interest rates in private capital markets in Africa (see, for instance, Kelly 1988 on Senegal, and Scarborough 1989 on Tanzania). Also in contrast to Asia, labor contracts are not yet sophisticated enough to make up for the financial market failure.

Financial markets have of course begun to develop, and they have become more sophisticated over time in some countries and more so (e.g., Kenya) than in others (e.g., Tanzania and Malawi). Nonetheless, as in the case of commodity markets, the tendency of African governments to monopolize control of capital in the formal sector through the financial institutions—often with large financial support from donor agencies—has tended to inhibit the development and competitive functioning of the private capital market. The shift to privatization that has occurred during the course of structural adjustment has been so swift that there has not been adequate time allowed for assisting with the development of financial markets or for assessing the merits of an appropriate role for the public sector (see, for instance, Lele, Christiansen, and Kadiresan 1989).

Public-Sector Intervention in Marketing

In this section, we review the performance of the public-sector marketing operations. In particular, we evaluate the extent and causes of inefficiency and their implications for future policy.

Marketing costs

One of the most pervasive themes of liberalization has been a concern about the excessive marketing costs of parastatals. In this context, a clear distinction needs to be made between problems arising from financial conditions or from management weaknesses, and those linked to political intervention.

Assessing the size of marketing costs (defined here to be the difference between the value of payments to producers

and the total expenses incurred in selling the crop either internally or externally) is difficult, as data on these costs are incomplete, frequently unreliable, and generally not comparable among countries⁶ (see Table 2). In addition, data for public and competitive private sector operations are rarely available in Africa to permit thorough comparative analysis of the private and public sectors, the legitimate costs of marketing, and the avoidable inefficiencies in the public sector.

It is generally recognized that unit marketing costs tend to be higher in Africa than in Asia because unit transport costs are higher and distances are greater (Lele, Christiansen, and Kadiresan 1989). While wages in the public sector are commonly believed to be high in Africa, recent evidence indicates that this perception is not entirely correct (Lindauer, Meesook, Suebsaeng 1988). Public sector wages are higher than in the private sector for unskilled labor, but for skilled labor they tend to be lower. Nevertheless, the normal costs of marketing, storage, and processing may well tend to be higher in the public than in the private sector due to excessive employment and other inefficiencies in handling, transport, storage, etc.

Kenya. The performance of Kenya's parastatal sector is the most interesting because it is mixed. Kenya offers successful examples of semiautonomous agencies (e.g., the Kenya Tea Development Authority and coffee and dairy cooperatives) that have been important to the growth of smallholder production. At the same time, some parastatals and cooperatives have had a decidedly mediocre record.⁷ The most spectacular of the successes is that of KTDA, which is also the most studied crop-marketing organization in Africa (Paul 1982, pp. 60-62). The causes of this success deserve to be reviewed.

Tea required further processing and adequate supply of raw material was critical to building processing capacity—thereby providing a rationale for KTDA's monopoly on purchasing the material. The private sector was uninterested in investing in processing units for small farmers, since units—given that tea leaf needs to be processed

Table 2
Marketing expenses per ton of grain purchased by marketing boards in Malawi, Kenya, and Tanzania, 1972/73-1985/86
(Converted to US\$ using real effective exchange rates)

Year	Malawi				Kenya				Tanzania			
	Smallholder Payments		Marketing Costs		Smallholder Payments		Marketing Costs		Smallholder Payments		Marketing Costs	
	(US\$)	(%)	(US\$)	(%)	(US\$)	(%)	(US\$)	(%)	(US\$)	(%)	(US\$)	(%)
1972/73	120	68	55	32	NA	NA	NA	NA	NA	NA	NA	NA
1973/74	115	59	79	41	NA	NA	NA	NA	NA	NA	NA	NA
1974/75	129	60	87	40	NA	NA	NA	NA	NA	NA	NA	NA
1975/76	208	60	138	40	NA	NA	NA	NA	NA	NA	NA	NA
1976/77	163	57	125	43	NA	NA	NA	NA	NA	NA	NA	NA
1977/78	182	54	156	46	NA	NA	NA	NA	NA	NA	NA	NA
1978/79	198	57	151	43	NA	NA	NA	NA	NA	NA	NA	NA
1979/80	221	48	238	52	NA	NA	NA	NA	NA	NA	NA	NA
1980/81	192	45	232	55	94	68	90	32	NA	NA	NA	NA
1981/82	148	45	180	55	66	73	61	27	NA	NA	NA	NA
1982/83	133	53	118	47	30	68	60	32	44	59	244	41
1983/84	116	52	105	48	38	58	99	42	72	71	189	29
1984/85	120	56	95	44	65	62	162	38	26	60	221	40
1985/86	145	61	91	39	89	66	97	34	NA	NA	NA	NA

Source: Malawi data from ADMARC 1972-87, except for marketing costs for 1974/75-1978/79 from World Bank 1986a. Kenya data from Coopers and Lybrand 1987. Tanzania data from World Bank 1986b. Real effective exchange rates from P. Seka/MADIA.

reasonably quickly after harvesting to maintain high quality of the processed product—for smallholders needed to be spread out in remote areas of production. Returns would be obtained too far in the future, when smallholder production developed, while investments in processing were needed up front (Lele and Meyers 1987). (The same arguments—ensuring adequate supply to processors—have applied for the development of a monopoly of coffee processing developed in the cooperative sector in Kenya). Lamb and Muller (1982) argue that KTDA does not provide a model of either rural development or public enterprises that can be neatly transferred to other countries, but they do point to four features that are instructive. First, KTDA was able to maintain its organizational autonomy. Its ability to do so was largely due to financial success, to the powerful domestic political constituency that tea growers became, and (to a not insignificant extent) to the support provided by external sources of financing (the Commonwealth Development Corporation and the World Bank's concessional IDA credit)—especially since initial revenues would not have been adequate to pay back commercial debt provided to KTDA. Second, the KTDA exerted considerable control over the use of its resources, with the result that resources were applied to tasks that were critical to each stage of development. "This stands in marked contrast to many other examples of institutional development, where the drive for bureaucratic growth often simultaneously creates both organizational redundancy and under-deployment to key functions" (Lamb and Muller 1982, p. 57). Third, KTDA had an effective network of accountability built into all aspects of its operations. This prevented unrealistic assessments of potential performance and provided staff with necessary incentives. Excellent technical support from KTDA's two financiers, CDC and IDA, played an important role in enhancing KTDA's professionalism. Finally, economic incentives to producers were provided in the form of a direct link between producer and world market prices. This link also served as an incentive for improving the quality of tea (Lamb and Muller 1982).

In sharp contrast to the success of KTDA are the problems of Kenya's National Cereals and Produce Board (NCPB). These are of special interest because, as will be seen later, they are not unique to Kenya. Similar problems are faced by Malawi and Tanzania, suggesting that issues related to intra- and inter-year price stabilization in the case of cereals for the domestic market have a generic quality; this is different from crops involving exports, where the principle of residual producer policy seems to apply. Maize marketing and the government's role have been an intensely political issue in Kenya. Numerous commissions of enquiry established over the years have recommended that the government relinquish its monopsony position in maize marketing and function as a buyer and seller of last resort. Until the latter half of the 1980s, the government virtually ignored this advice. Perhaps due to pressure from donors, it has now allowed inter-district movement of grain and has given millers the right to purchase maize directly in the market. These measures have been undertaken as a result of the escalating marketing costs in the 1980s, particularly finance costs (see Table 3).

Overall NCPB deficits increased by over 100 percent in five years—from Ksh 312 million in 1980/81 to Ksh 647 million in 1985/86. As in other countries, however, the deficits stem from more than one source. In part, they were

Table 3
NCPB financial management, 1980-86

Year	Finance Costs ('000 MK)	Bank Overdrafts & Loans ('000 MK)	Loans From CSFC ('000 MK)	Government Agency ('000 MK)
1980/81	75,000	85,734	711,333	224,843
1981/82	119,000	140,285	1,316,273	229,627
1982/83	209,000	303,638	1,316,921	252,371
1983/84	197,000	144,743	1,345,677	165,933
1984/85	320,000	200,561	1,235,677	120,869
1985/86	371,000	262,015	2,235,677	31,050

Note: CSFC is the government-owned Cereals and Sugar Finance Corporation.

Source: Coopers and Lybrand 1987.

the result of a buildup of stocks related to unusually high levels of production and increased indirect overhead costs, i.e., administrative costs. A report by Coopers and Lybrand Associates concludes that these large increases in overhead costs "cannot be explained by corresponding increases in either the volume of business activity or the annual level of general price inflation in any of the years, with the exception of 1985, suggesting a significant absence of effective management and control of expenditure within the NCPB in the past" (Coopers and Lybrand 1987, Annex 8, p. 5). Thus, despite an increase in the margin per bag—which rose from Ksh 40.25 in 1980 to Ksh 133.55 in 1986—deficits increased sharply (Coopers and Lybrand 1987, Annex 8).

A more comprehensive examination of public sector enterprises in Kenya (Grosh 1988)—covering 38 parastatals, including the NCPB—acknowledges that many of them have been poorly managed. Grosh argues, however, that neither the donors' solution of widespread privatization nor the government's efforts to tighten control over managers is likely to constitute a genuine solution to the problems of many public enterprises. She reaches several conclusions that are consistent with our own observations and relevant for an understanding of the factors affecting parastatal performance in countries other than Kenya. First, there is a wide difference in performance, ranging from "excellent to abysmal," among Kenya's public enterprises. When assessed in terms of profitability and efficiency, approximately half of the enterprises have performed well since independence.⁸ Second, "firms which have attempted to subsidize their consumers or suppliers have usually run into financial problems. Their poor financial condition then causes inefficiency" (Grosh 1988, p. 48). This implies a need for adequate financing to account explicitly for the costs of any subsidies in grain price-stabilization operations. Third, many of the problems of public enterprises have occurred since 1978 and are due to the stringent economic environment of the past decade. One of the critical weaknesses these enterprises face in dealing with this environment is their chronic undercapitalization, which often leads to excessive financing charges (see Lele, 1989a; Lele, 1989b). In addition, foreign exchange shortages have caused shortfalls of imported capital goods that also impair efficient operations. Fourth, public enterprises are often required to undertake investments or provide services that are motivated by distributional rather than commercial criteria (Lele, van de Walle, and Gbetibouo (1989) make a similar point with respect to cotton parastatals in West Africa). Yet criticism of their poor performance rarely includes a critical

analysis of the legitimate costs of doing developmental business (e.g., construction of feeder roads to expand smallholder production in cotton areas). In this context, it is interesting to note, for example, that the tea roads in Kenya were financed by the government, whereas in Cameroon, financing for cotton roads has come largely from SODECOTON—a problem often overlooked in analyzing SODECOTON's financing.

Malawi. In Malawi, the operation of private-sector marketing has been weak—in large part because government restrictions (since 1975) have prevented Indian traders from residing or working in rural areas, while the lack of experience and working capital on the part of Malawians has not filled the void adequately. Not only has the private sector been weak, but, in contrast to Kenya, there has not been an effective network of either foreign or domestic voluntary agencies operating at the local level. Similarly, grassroots institutions to represent the interests of low-income rural households are severely underdeveloped; the government has not actively encouraged efforts like the Harambee or the cooperative coffee and dairy institutions in Kenya. In response to this lack of private sector activity, the government expanded the operations of ADMARC (the marketing parastatal) to fill the void—a step which donors supported actively in the 1970s through financial support, but without simultaneously helping to develop the Malawian private sector.

As can be seen from Figure 1, ADMARC's nominal marketing costs per ton increased steadily over the 1973-1987 period, although costs per ton increased only slightly in real terms. For example, ADMARC's average total marketing costs per ton of purchases for 1972/73-1978/79 were K 85.73. For 1980/81-1986/87, these costs were K 172.89—an increase of about 102 percent (see Figure 2 and Table 2).⁹ Between 1980 and 1986, the GDP deflator increased by approximately 100 percent. Over this same period, however, there were sustained increases in transport charges, employee salaries, and finance charges.

In the case of transport costs, the increase was due to devaluation of the currency and to increasingly insecure external transport routes (see Table 4). The increase in employee salary costs was due largely to a rise in numbers. Head-office senior staff increased from 428 to 742 between 1980/81-1982/83 and 1985/86-1987/88, while junior staff increased over the same period from zero to 1,224. During this time, the average number of staff members in the field increased by 58 percent, from 16,095 to 24,089, but average annual purchases during the same period increased by only about 5 percent (Deloitte, Haskins, and Sells 1987, Annex 3).

The increase in finance costs is also noteworthy. For the 1979/80-1986/87 period, the average finance charge was K 26.96 as compared to K 9.68 per ton for 1972/73-1978/79 (see Appendix). The steady increase in overdrafts and finance charges between 1978/79 and 1986/87 can be seen in Table 4.¹⁰ The increased finance charges were due largely to the increase in producer prices and the resultant decrease in liquidity. Some of these crop price increases were mandated by donors as part of the structural adjustment process. Perhaps more important than the increased finance charges, the liquidity problems led to delays and limits on the amount of crop purchases, which caused farmers to lose confidence in the ability of ADMARC to function as a buyer of last resort.¹¹ These problems were not foreseen in the donor assessment of ADMARC's perfor-

Figure 1
ADMARC Marketing Costs Per Ton, 1972/73-1986/87
Malawi kwacha per metric ton

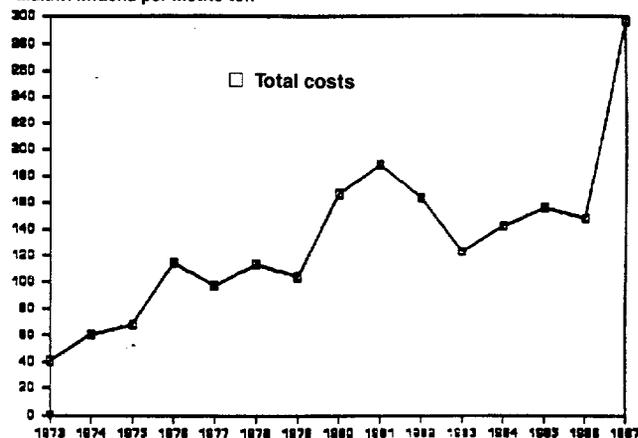
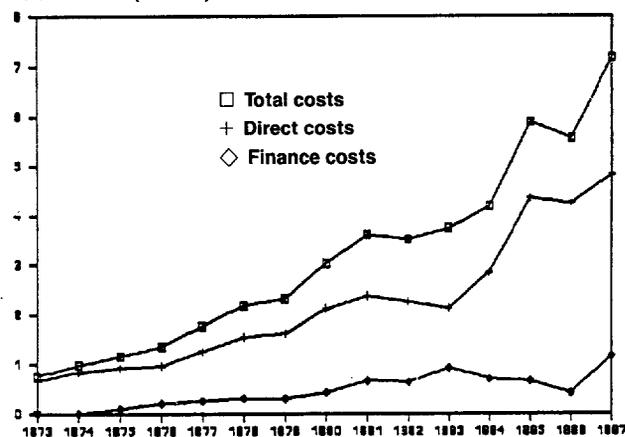


Figure 2
ADMARC Marketing Costs, 1972/73-1986/87
Malawi kwacha (millions)



mance, suggesting that in evaluating a parastatal's performance, role, and policy implications, a broader range of issues needs to be considered than is typically included.

Although the rise in the number of employees per ton of purchases seems excessive, in part this represents an effort by ADMARC to increase the number of seasonal markets in order to provide less expensive access (in terms of transport costs) to purchased inputs, sales points for outputs, and food for households that are dependent on the market to meet their food deficit. An evaluation of the cost effectiveness of markets must therefore include all the benefits they offer and not simply attribute costs of maize purchases. The location of markets of course does make a difference to the efficiency with which these operations are performed. Donors have argued that in Malawi the location was influenced by political factors. Although they maintain that considerable overlap in the catchment areas of these markets is likely because of the political decisions surrounding their placement, approximately 75-80 percent of the rural population is within eight kilometers of a seasonal market. There is no consensus on this issue, however, as the few voluntary agencies operating in Malawi (e.g., OXFAM), have cited some hardships as a result of the closing of those markets (see Lele). In the long run, the

Table 4
ADMARC's expenses related to crop trading, 1978/79-1986/87

Year	Selling Expenses	Direct Expenses	Administrative Expenses	Long-Term Borrowing	Over-drafts	Finance Costs
1978/79						
('000 MK)	3,189	12,916	4,106	31,244	-	2,996
(MK per Ton)	14	58	18	140		13
1979/80						
('000 MK)	3,528	17,707	4,821	37,884	979	4,246
(MK per Ton)	19	97	26	208	5	23
1980/81						
('000 MK)	3,584	20,114	5,874	50,995	6,419	6,530
(MK per Ton)	19	105	31	265	33	34
1981/82						
('000 MK)	3,459	19,114	6,363	55,587	5,714	6,236
(MK per Ton)	16	89	29	258	26	29
1982/83						
('000 MK)	2,415	18,899	6,758	69,261	14,002	9,269
(MK per Ton)	8	62	22	228	46	31
1983/84						
('000 MK)	6,745	21,524	6,624	66,043	8,308	6,782
(MK per Ton)	23	73	23	226	28	23
1984/85						
('000 MK)	10,107	33,375	8,901	54,387	18,828	6,464
(MK per Ton)	27	88	24	144	50	17
1985/86						
('000 MK)	8,672	33,786	9,091	53,456	29,172	4,054
(MK per Ton)	23	90	24	143	78	11
1986/87						
('000 MK)	10,272	37,961	11,905	81,011	15,721	11,591
(MK per Ton)	42	157	49	335	65	48

Source: ADMARC 1972-87.

establishment of an effective network of private traders and grassroots institutions, including local government, cooperatives, and voluntary organizations, could provide production inputs and food supplies on a regular basis at a reasonable cost. The major donors did not, however, take active interest in such broadbased institutional development until recently. In any case, it will take at least ten years for an effective network of institutions to develop even if it is politically permitted by government and effectively promoted by donors. The latter will depend on whether the wholesalers of external aid such as the World Bank and USAID develop effective networks with the small domestic and external agencies that can more effectively work with the micro agents in villages than their larger counterparts. Otherwise there is a danger that voluntary agencies will suffer from oversupply of external finance and limited good ideas, as happened with integrated rural development projects in the 1970s. Until effective grassroots institutions emerge, agencies such as ADMARC have an important role to play in making fertilizer and other inputs available to farmers—especially those without access to credit or purchasing power. The benefits of this role are difficult to measure. The important issue is how to minimize the costs of these public sector operations while promoting development of other institutions, rather than whether such functions ought to be performed by the government.

Tanzania. Parastatals in Tanzania have been negatively affected by a range of government policies. For instance, producer prices of export crops were typically determined

on a residual basis, i.e., after taking into account the cost of operating the parastatals. In the case of maize, the National Milling Corporation (NMC) was required to purchase maize at prices that both encouraged production and sought to protect consumers. These price levels made little allowance for the costs of marketing and processing, however. For example, between 1972-75 and 1978-81, maize producer prices increased by 24 percent, but the margin for the conversion of maize to sembe was reduced by about 55 percent, and the official consumer price of maize was lowered by 23 percent (World Bank 1983). Indeed, in 1981/82 government-set retail prices for preferred cereals, drought staples, and pulses were below NMC's retail costs (World Bank 1983; Bryceson 1985; Kaberuka 1984).

Government involvement extended beyond pricing decisions to the appointment of parastatal managers.

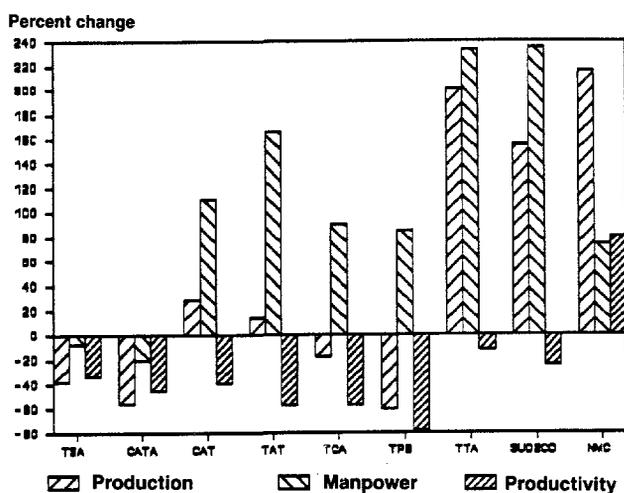
The split responsibility between the Ministry of Agriculture and the State House for appointment and supervision of parastatal management is no less an important factor in explaining inadequate control over parastatals. The Executive Chairman of the Board of Directors is a Presidential appointee, and the Minister appoints Board members. The parastatal general manager is bureaucratically essentially equal to Principal Secretary of the Ministry. The Ministry does not have the jurisdiction to dismiss a general manager, even in cases of flagrant violations of management standards, but can only recommend action to the Board of Directors or the President. Further, when

appointments are made centrally, frequently criteria other than commercial or managerial acumen seem to enter in the choice of a general manager. Since the State House makes CEO appointments across the spectrum of the roughly 400 parastatals, its span of control is far beyond levels which would be considered desirable under reasonably well working systems, of management. It is no wonder, therefore, that the degree of control needed on a daily basis to ensure managerial efficiency in the agricultural sector is not exercised and major decisions even about the future of the organization itself... remain pending for years (World Bank 1983, pp. 84-85).

Inefficiency in day-to-day operations, including the weak financial and physical performance, were attributed to weak management and poor technical skills, lack of competition, externally imposed pricing policy, and the government's requirement that parastatals provide a complete set of social services for their employees—including education and medical facilities, work and private transportation, prepared food services, provision stores, mechanical workshops, and sports teams.¹² Given this interference, the productivity of parastatals declined significantly between 1974 and 1981. The volume handled by agricultural parastatals increased by 18 percent, whereas parastatal employment increased by 37 percent, leading to a decline in labor productivity of 14 percent. Although the NMC increased its labor productivity noticeably between 1974/75 and 1977/78, processing volume decreased sharply between 1977/78 and 1980/81, with the result that the same number of employees handled roughly half the volume. Only two parastatals decreased employment between 1974 and 1981. For all parastatals, a decline in volume of 17 percent was accompanied by a decline in employment of only 1 percent during the same period (see Figure 3).

As a result of these inefficiencies, most crop parastatals accumulated large losses. In 1980/81, only the coffee and sugar parastatals showed a profit; the remaining nine showed combined losses of Tsh 692 million (US\$84 million), which is equal to 21 percent of the value of their processed

Figure 3
Change in Tanzania's Parastatal Production, Manpower, and Productivity, 1974-81



commodities. NMC alone was responsible for over two-thirds of total losses, representing 31 percent of its sales. The parastatals' overdrafts had reached Tsh 5,127 million and accounted for 80 percent of the loans of the National Bank of Commerce, the country's only commercial bank.

It is important to stress that administrative costs resulting from the growth of employment, although excessive, were a relatively small part of total losses, e.g., only 1 percent of sales in the case of NMC. The costs of financing and sales (which reflect purchases plus transport and processing costs) accounted for 97 percent of losses in 1980/81. Thus, even a significant reduction in administrative expenses would have had little effect on losses.

Senegal. In Senegal, low, variable, and declining rainfall has caused the production of groundnuts to stagnate. At the same time there has been an increase in the area planted to sorghum and millets as population pressure on the land has increased. Elsewhere, Lele, Christiansen, and Kadiresan (1989) have demonstrated the devastating effect of the elimination in 1980 of ONCAD (the marketing parastatal) on the network of input distribution and output purchases in the vital Groundnut Basin. The collapse in input supply has been complicated by the reluctance of the private sector to supply production inputs on credit, although the private sector has been active in the purchase of groundnuts for crushing. Market prices of groundnut oil have been increasing relative to what the processing companies (e.g., SONACOS) that have replaced ONCAD will offer for groundnuts. Government disbanded private Lebanese traders in the mid-1960s, establishing OCA and later ONCAD, each of which operated as a vertically integrated agency that supplied inputs on credit and purchased output. Each of these suffered from highly variable repayment rates of credit as well as highly variable marketing margins for groundnuts offered by small farmers (see Table 5).

Table 5
Groundnut producer prices and marketing board margins in Senegal, 1968/69-1983/84

Year	Net Producer Price		Marketing Bd Margin		Marketing Sale Price (F/Kg)
	(F/Kg)	% of Sale Price	(F/Kg)	% of Sale Price	
1968/69	16.50	67%	8.30	33%	24.80
1969/70	16.50	54%	13.85	46%	30.35
1970/71	17.60	46%	20.74	54%	38.34
1971/72	22.00	64%	12.12	36%	34.12
1972/73	22.00	53%	19.90	47%	41.90
1973/74	25.50	61%	16.40	39%	41.90
1974/75	40.00	76%	12.61	24%	52.61
1975/76	40.00	75%	13.00	25%	53.00
1976/77	40.00	72%	15.80	28%	55.80
1977/78	40.00	73%	14.90	27%	54.90
1978/79	40.00	71%	16.00	29%	56.00
1979/80	43.00	68%	20.10	32%	63.10
1980/81	45.00	54%	38.00	46%	83.00
1981/82	60.00	68%	28.00	32%	88.00
1982/83	60.00	67%	30.00	33%	90.00
1983/84	50.00	51%	48.50	49%	98.50

Notes:

¹ These are conservative official estimates. The actual price received by the farmer is much lower when the value of losses and impurities generally imputed in official withholdings is taken into account.

² These are prices paid by the processing plants to marketing boards. Source: Jammeh 1987.

The excessively high marketing costs that characterized ONCAD were attributable to mismanagement and corruption, including rapid expansion of staff (Jammeh 1988). For example, ONCAD's staff tripled from 400-500 full-time staff in 1966 to 1,800 in 1968, 2,097 in 1974, and 2,964 in 1979. During this period salaries accounted for over half of the agency's operating expenses. This excessive growth in personnel could not be justified by increases in ONCAD's marketing functions or by increases in groundnut transactions but was due to political pressure to increase employment. The impact of these increased operating costs on marketing margins can be seen (see Table 5) in terms of the steady increase in margins charged per kilogram of product dating from 1969/70 to 1973/74—after which margins declined from 1974 to 1978.

More recently, the government has favored a strong diversification program to reduce the risk of relying solely on groundnuts. Investments in agricultural production and those in industry and construction increased. Investments within agriculture shifted away from groundnut production toward other crops, rural development projects, irrigation, and groundnut processing. As a result, operating capacity of processing firms grew from 695,000 tons in 1976 to 895,000 tons in 1987, while the actual capacity used as a percentage of total operating capacity fell from 95.5 percent to 59.2 percent during the same period (see Figure 4).

Marketing costs were lowest during the period in which private traders were allowed to compete with the cooperatives (Jammeh 1988). In addition, the monopsonistic parastatal had several policies that served as disincentives to producers, including onerous procedures for collecting credit provided for inputs. The result of these procedures was to cause serious delays in payments by cooperatives, thereby encouraging producers to seek alternative marketing channels, even if on disadvantageous terms. Finally, abuses and irregularities in the parastatal's input distribution program were common: shortages or late arrival of often damaged inputs, diversion of needed supplies onto the parallel market for personal gain, regional imbalances favoring the Groundnut Basin, and patronage. In some cases, inputs requested by cooperative officials would remain in warehouses while being charged to members. Therefore, although inefficiency was a problem, it must be

stressed that many of the policies that contributed to this inefficiency were beyond the parastatal's control.

The relative importance of the cost of increased employment, debt forgiveness, and unpredictable marketed volumes in explaining the financial problems of ONCAD is not known, as the data for ONCAD are not available to make such judgments. Nevertheless, it is clear from the recent experience with privatization (discussed later) that although private traders tend to be active in output marketing, the salient issue is how to develop an integrated delivery system that is not monopolistic but that ensures repayment of credit provided for inputs—given that the private traders tend to be unwilling to provide credit for inputs, and the producers unable to purchase inputs without credit.

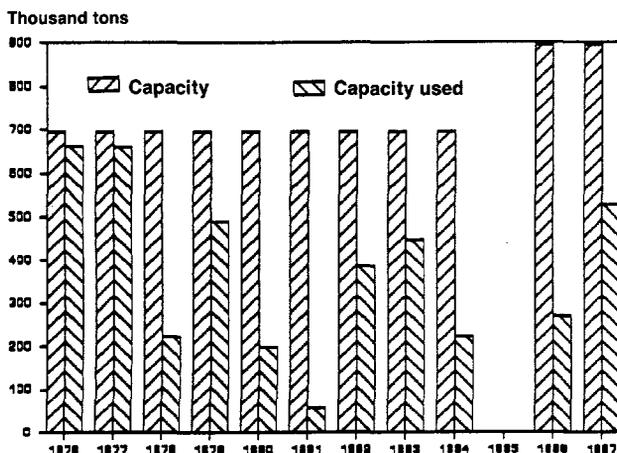
On balance, in each of these four countries there are examples of government intervention that contributes to the inefficiency of parastatal operations. The solution, however, does not lie exclusively with privatization. Instead, at least two steps are necessary to strengthen parastatals: (i) greater independence from central government control, and (ii) explicit subsidy operations performed on behalf of the public sector for which criteria and incurred costs are made overt. With these changes, a parastatal will be able to achieve greater operational efficiency, offer greater competition to the private sector, and provide the government with development functions (e.g., price stabilization) at an explicit cost.

Instability of agricultural institutions

A crucial factor for improving the performance and productivity of farmers, especially those with small-scale operations, is the quality of institutional support.¹³ The instability of agricultural institutions has contributed to undermining farmers' confidence in them and, therefore, their willingness to rely on factor and output services. Examples from Tanzania and Senegal illustrate this point.

In Tanzania, marketing institutions have been in a state of nearly continuous change since independence, with most changes directed toward achieving greater central control over agricultural production and marketing. As Candler (1986) shows, in virtually every year between 1961 and the early 1980s, there was a major change in marketing arrangements in Tanzania. Following independence in 1961, Tanzania experienced extensive growth in cooperatives, which the government encouraged as a means of counteracting the dominance of Asian traders. In 1963, the government created the National Agricultural Production Board (NAPB) as the coordinating institution for cooperative grain trade. By 1966, the cooperatives were supplying almost all of NAPB maize purchases (Bryceson 1985, p. 56). In 1967, the Arusha Declaration called for the creation of multipurpose cooperative societies to replace the marketing cooperatives, as the former were accused of promoting capitalist relations. In the following year, guidelines were implemented that effectively transferred control of the cooperatives from individual boards to state-appointed managers. This was part of an increased government role in marketing, partly in order to collect revenue, that became especially important after the abolition of the direct tax in 1969 and was reflected in the creation of new crop authorities. In 1971, a decision was taken to treat Ujamaa villages as multipurpose cooperatives, thereby further confusing the role of existing cooperatives. Over the next five years, numerous decisions were taken that profoundly changed the nature of cooperatives. By 1976, all cooperative unions had been abolished

Figure 4
Senegal's Groundnut Processing Capacity and Utilization, 1976-87



and replaced by village cooperatives and crop parastatals (Candler 1986, pp. 6-10).

Dissatisfaction with NMC mounted quickly, due mainly to the tremendous year-to-year fluctuations in the volume NMC handled due to climatic factors, frequency of late or missed payments for purchases, major financial losses that resulted from being required to sell at prices below cost, large storage losses (estimated by some at up to 30 percent), and corruption. In the face of rising parastatal losses—financed by overdrafts on the National Bank of Commerce that were so large as to be considered a threat to the NBC's financial stability—and continued dissatisfaction with performance, a commission was appointed in 1980 to study the situation, and this led to the reestablishment of cooperatives in 1982. Since 1986, cooperatives have been reinstated, crop parastatals have been replaced by commodity boards, and the private sector is being allowed a greater role.

Another example of instability in Tanzania comes from the experience with cotton marketing. The Cotton Lint and Seed Marketing Board (CLSMB) was created in 1955 to coordinate cotton-sector activities and market seed and lint, while cooperatives performed ginning and oil refining; together, these accounted for much of the success of smallholder cotton during the 1950s and 1960s. The CLSMB was replaced in 1973 by the Tanzania Cotton Authority (TCA), which centralized all cotton activities and then took over the cooperatives' functions when they were dissolved in 1976. In 1984, TCA transferred responsibility for some ginneries and oil mills to the regional farmers corporation, whose shareholders were Ujamaa villagers. In 1985, the TCA was dissolved and replaced by the Tanzania Cotton Marketing Board (TCMB), but without responsibility for ginneries and primary marketing, which were returned to the newly restored cooperatives (Lele, van de Walle, and Gbetibouo 1989, p. 25).

These reorganizations inevitably led to complete confusion on the part of producers as to which agency was to serve them and resulted in delays in payments to producers. Furthermore, the separation of responsibility for credit, input distribution, and farm-gate purchasing contributed to extremely low repayment rates, which aggravated the financial difficulties of crop parastatals. More recently (1986-87),

... excellent weather and structural adjustment policy changes, including an improved producer price (especially relative to maize), led to a bumper crop... However, institutional factors constrained the management of the resulting supplies. TCMB purchased less than two-thirds of the crop due to lack of funds, transportation problems, and weaknesses of the cooperatives (Lele, van de Walle, and Gbetibouo 1989, p. 25).

In *Senegal*, the groundnut sector was hurt by several institutional changes, the most important of which was the institutional arrangements for services. In this regard, the changes in Senegal were reminiscent of those in Tanzania because they discouraged private trade and created a parastatal (ONCAD) as a substitute. ONCAD encountered financial difficulties when it was required by the government to forgive the debts of drought-affected producers but was not reimbursed. At the same time, mismanagement of funds and overexpansion of its staff due to political pressures contributed to problems with the reliability of

input supplies. When ONCAD was abolished in 1980, its smallholder credit program was eliminated and to date has not been replaced by a program of comparable coverage.

The institutional instability experienced by Tanzania and Senegal obviously has undermined smallholder confidence in the government and contributed to unreliable sources of supply for parastatals and agro-processors. This, in turn, has affected the availability of working capital for parastatals, interest costs, liquidity problems, and problems of excess processing capacity. It is this set of problems that has attracted the attention of donors interested in improving the performance of agricultural institutions. A common solution has been to restructure the parastatals, privatize several of the functions performed by the marketing board (e.g., input distribution and output marketing), and eliminate or scale back other functions (e.g., food security and buyer/seller of last resort operations).

Lessons from experience with parastatals

Do parastatals have a role to play—given that they suffer from numerous problems? The World Bank's review of agricultural marketing experience argues:

Current disenchantment with parastatals should not be allowed to obscure the important role they have played in developing countries in Africa and Asia. They have been the dominant market force for export products and large scale grain marketing, and were often inherited from the colonial power. Sometimes, parastatals have been used to wrest control of the marketing system from ethnic minorities—in which case political considerations may well have overridden concerns for efficiency. In other cases, governments seem to have felt that it was easier to replace an oligopolistic marketing structure than to regulate it. In yet other cases, governments have seen parastatals as a way of ensuring government "control" of domestic food supplies. They have been unwilling to leave this vital function, especially stockholding, in private hands (World Bank 1988, pp. 7-8).

A USAID study that examined the problems with parastatals summarized the debate about parastatals as follows:

Some economists argue that agricultural parastatals are unwarranted governmental intrusions in the markets for inputs and products, and should therefore be dismantled forthwith to make way for a laissez-faire market economy. Others, noting the volatile nature of production, the inadequate distribution and marketing systems, arbitrary and rapidly changing policies, and the political instability of many of these nations, argue that because the risks to entrepreneurs are so great, private interests will not organize effective markets, so parastatals are necessary to fill the void. They contend that parastatals *per se* are not the problem, rather, the ways in which they are (mis)managed and the uses to which they are put, especially to reward rent-seeking (Keene, Monk and Associates 1984, p. 12).

Accepting these views creates a much more difficult problem for policymakers. Instead of simply encouraging privatization, it is necessary to explore solutions to the problem of political intervention in parastatals to ensure competition among different forms of institutions. We will return to this subject after examining the experience of the MADIA countries with cooperatives.

Cooperatives

The importance of agricultural marketing cooperatives in the context of recent policy reforms is that, as stated earlier, donors and governments see them as a second best alternative to parastatals. Although this perception contains some elements of truth, it is also a reason for many of the problems that have plagued so many cooperatives in the MADIA countries. The conclusion that emerges from the experience with cooperatives is that their all-too-common failure is due to the nature and extent of public sector involvement in their management and operation. The motivations for public sector intervention are similar to those for involvement in marketing parastatals: control of marketing channels, financial resources, and political power. Therefore, although public sector support is typically crucial to the success of cooperatives, the nature of intervention as it is commonly practiced serves to undermine the benefits of and the incentives for grassroots participation.¹⁴

To understand the nature of the conflict between the ingredients required for successful cooperatives and the appropriate role for the public sector, it is necessary to distinguish between what is necessary and what is excessive.

The broader concept of co-operation . . . acknowledges the interaction between economic and socio-political power and, therefore, recognizes the frequent need for structural change or for political mobilization for co-operatives to be able to benefit the poor. According to the broader view, even with such change or innovation, but particularly in the absence of either, paternalism and external assistance in the form of leadership, management and finances are inevitable as a step towards more voluntary and self-reliant cooperatives in the long run (Lele 1981, p. 58).

A cooperative that is so centralized in its management and decision-making authority as to assure the state sufficient control to mitigate any perceived threat to the state's power will typically fail to meet the needs of a voluntary and active membership. As a consequence, cooperatives have the best chance of success when the political leadership of the country is secure and willing to both tolerate groups with divergent interests and at the same time provide technical and training support for the cooperatives' operations.¹⁵

Among the MADIA countries, *Kenya* has provided the most encouragement for cooperatives by developing a highly decentralized system that articulates and responds to producer interests (Alila 1985). As a result, cooperatives represent about 50 percent of small-farm households. The coffee processing and marketing cooperatives are by far the most active, accounting for half the membership in agricultural cooperatives and 71 percent of the turnover (Lele and Meyers 1987).

Experience suggests that cooperatives dealing with export crops have been more successful than those concentrating on subsistence-related food crops. Many export crops require further processing and cannot be used for

domestic consumption or sold easily in rural markets—making a centralized marketing facility easier to organize. Moreover, crops that require processing provide scope for economies of scale where the value added is usually substantial. In *Kenya*, the major crops other than coffee that are marketed through cooperatives are (with the exception of milk, which is considered a cash crop) predominantly export crops.

Promotion of food cooperatives continues to receive enthusiastic support from a broad range of interests, despite their limited success. To date, with the exception of maize in certain surplus areas, cooperatives have marketed only small amounts of food crops. In *Africa*, cooperative management has rarely been found to be efficient when commodities are bulky and low-value (e.g., maize), or have complicated and expensive processing requirements (e.g., cotton and sugar).

In *Tanzania*, strong grassroots cooperatives were encouraged before and immediately after independence, with the result that they grew in political strength to the point of being willing to challenge the authority of the ruling party—first TANU and later CCM.¹⁶ Subsequently, however, their political power came to be perceived as a threat to the existing authorities and caused the government to increase its control over the cooperative movement. As the members lost control over the operations of the cooperatives, the cooperatives became less effective in furthering the interests of their members. For several reasons, including the evolving political philosophy of government and complaints of increased corruption, the government abolished cooperatives in 1976 and replaced them with parastatal crop authorities and, as part of villagization, with small village societies (Bryceson 1985; FAO 1987). The measurable consequences of this change in terms of agricultural production were so disastrous that in 1982 parliament passed legislation in 1982 reestablishing cooperatives.

Although the lessons of the early 1970s with regard to the consequences of too much government intervention in the operations of cooperatives are clear, it is by no means certain that the new cooperatives will be successful. The attitude of the government in the short run is more favorable than in the past; yet there is also evidence that in the long run the government views cooperatives as a tool of social policy—that membership in cooperatives is not voluntary but compulsory. In addition, there are several more technical factors that will hinder the prospects of success for cooperatives. For example, after a hiatus of a decade, the cooperatives were poorly prepared for taking over responsibility for agricultural marketing; the agricultural economy is weak, which will make it difficult for cooperatives to maintain financial viability; there is some evidence of overstaffing; and only a limited amount of technical assistance is available to cooperatives (FAO 1987, pp. 17-18).

Hanak and Loft's (1987) comparison of the performance of cooperatives in *Kenya* and *Tanzania* is especially helpful for understanding the ingredients of successful cooperative

activities. They point out that, at independence, a grass-roots cooperative movement was more advanced in Tanzania than in Kenya; whereas in Tanzania small farmers had been allowed to produce export crops, in Kenya production of export crops was confined to estates. Kenya, however, turned out to be more tolerant of cooperatives than Tanzania. Referring to the efforts of Nordic donors to improve the performance and management of cotton cooperation in Tanzania, Hanak and Loft argue that the improvement in performance was dramatic—especially in comparison with cooperatives in other parts of the country.

The difference in performance in the two countries stemmed from the role of government. The Kenyan and Tanzanian governments and the Nordic donor group had a shared perception of cooperatives as an inherently appropriate institutional form. Both countries propped up weak cooperatives and developed mechanisms for external regulation. Kenya, however, built on the more successful cooperatives, whereas Tanzania retained many cooperatives despite their poor performance. The Nordic donors continued to support these poor performers despite "the Tanzanian government's clear transgression of the by laws of the International Co-operative Alliance in its 1976 action" because of the general wave of support for Tanzania. In Kenya, by contrast, the government's own intentions to focus on the less successful agricultural areas was essential to the progress of management capabilities in the Kenyan coffee, dairy, and pyrethrum societies and unions (Hanak and Loft 1987).

After twenty years of work with cooperatives, however, the Nordic donors have little to show for the effort outside of the coffee/dairy belt. Hanak and Loft argue that Nordic evaluations tended to overlook the fundamental issue of the viability of cooperatives in situations where they handle high-bulk and low-value crops grown in dispersed areas, or crops with complicated and expensive processing requirements. Hanak and Loft conclude that, "unless the Nordic donors openly begin to reassess the blanket assumption that cooperatives are a good thing everywhere, there are dangers that future promotion will again turn to areas where co-operatives do not stand a chance of success" (Hanak and Loft 1987).

Cameroon's experience with cooperatives also shows examples of extremely good and extremely weak performance. At present, there are about 500 formally registered cooperatives in the country (with total membership at approximately 400,000) dealing mainly with cocoa and coffee. In addition, there is a system of approximately 230 (as of 1987) savings and credit cooperatives (or credit unions) with a membership of 62,000; these are the most successful cooperatives in the country. The characteristic that seems to explain the variation in cooperative performance is the extent of state involvement:

There seems to have been almost an inverse relationship between support provided to cooperatives by government agencies and cooperative performance, i.e., cooperatives which received most government attention performed extremely poorly, and those which were insulated (often by efficient cooperative unions) to a high degree from government intervention performed well (personal communication with the authors).

The first credit union (1963) began, and subsequent expan-

sion occurred, in areas where *tontines* (informal savings and lending clubs) were already established. As a result, the credit unions have been able to formalize an already well-established institution (*tontines*) in ways that are beneficial to members. For example, before a newly formed cooperative can become a member of the Cooperative Credit Union League (the umbrella organization that provides management support, training, audits, and insurance services), it must operate as a pre-cooperative savings club to establish member confidence. Although credit unions are formal, registered cooperatives, they are rarely subjected to regulations or supervision by government cooperative agencies or central bank authorities. It is the presence of an effective umbrella organization—providing technical support and supervision—in conjunction with the absence of political interference that explains much of the success of the credit unions.

The experience of the credit unions is in contrast to that of the cocoa-marketing cooperatives in the Center and South provinces, which have been exposed to considerable government intervention, including the appointment of government-seconded civil servants as managers and senior staff. In general, government seems to regard these marketing cooperatives as parastatals, reserving the right of approval for budgets of individual cooperatives. This pattern of state intervention continues despite attempts at reform.

Prior to independence, there was an active independent cooperative movement. By 1960, there were 217 primary centers and higher-level cooperatives for marketing cocoa. In 1963, most of these cooperatives were dissolved, however. According to one source, their independence was perceived as a threat to the state (GTZ 1986, p. 10). Ten years later, the central government undertook a series of reforms directed at cooperatives:

Reforms of the period were conceived largely in a top-down manner, faced with the necessity, as the Ministry saw it, of rapidly establishing a cooperative "presence" at all primary cocoa markets to protect the individual seller from manipulation by the private cocoa buyers (GTZ 1986, p. 11).

Although these reforms offered the potential of farmer control over primary cocoa-marketing organizations, the state continued to dominate the management and operation of cooperatives. The pattern of continued government involvement in cooperatives, including secondment of large numbers of officials, represented a failure to distinguish between structures imposed by the state in response to the need for development and those for promoting voluntary participation at the household and local level.

In assessing the condition of a sample of cocoa-marketing cooperatives, a recent report (GTZ 1986, p. 17) concludes that the structure of the present system suffers from fundamental problems, as evidenced by the precarious financial situation of the cooperatives—eleven of the fifteen examined were technically bankrupt. The failure of cocoa cooperatives was attributed at one level to inadequacies in the financing system on which the cooperatives depend, to excessive costs within the cooperatives due to weak management, and to poor management advice provided by state agencies charged with supporting the cooperatives. At a more fundamental level, however, it can be argued that the real problem with the cocoa-marketing cooperatives is that the membership is neither capable of nor interested in

influencing the operation of the cooperatives. For example, the cooperatives are too large to facilitate communication or to allow a sense of community.¹⁷ Another dimension of the size problem is the absence of *intermediate* levels of farmer control, meaning that the gap between centralized management and the village—which is the natural administrative and organizational unit—is not bridged. The centralized administrative style of cooperatives stifles initiative on the part of the membership. The result of this structure is that cooperatives are “largely the creation of their managers, and these in turn are for the most part an emanation of the state” (GTZ 1986, p. 58).

Similar experiences with state involvement in cooperatives have characterized *Senegal*, which has alternately encouraged independent cooperatives and tried to control them through increased state involvement. In Senegal, the government in 1960 legislated a cooperatives statute (based on pre-independence French efforts) aimed at establishing a nationwide network of agricultural cooperatives. The new program, which was sponsored by Prime Minister Dia, was intended to “...provide a genuine feeling among its members that the coop was theirs, totally preempt credit and marketing from private traders and moneylenders, and thwart efforts by the *marabouts* to capture the new institutions” (Waterbury 1986, p. 81). The program was, however, inimical to so many rural interests, most notably the *marabouts*, that it contributed to Dia’s demise and was eventually termed “boy-scoutism” by Senghor himself. After 1964, the *marabouts*, party members, extension agents, and officials of ONCAD had made their own local arrangements, with the result that cooperatives fell under the influence of local patrons.

Although the nature of the cooperatives changed, the institutions were still encouraged by the government; by 1970, there were 1,870 cooperatives in Senegal, with over half (1,060) in the Groundnut Basin. Throughout the 1970s, cooperatives were under the jurisdiction of ONCAD, an affiliation that effectively converted the cooperatives into state-run entities within the agricultural bureaucracy and hurt their image and performance. The dissolution of ONCAD, the increasing politicization of cooperatives, internal corruption, and pressure from donors caused the

government to reform rural cooperatives. As was the case earlier, the philosophy behind the reforms advocated by donors and some government agencies was that “...a unit must be found whose members trust one another, who will police themselves so that free-riders do not take over, who will feel directly responsible for their affairs and for their production, and who will hold larger cooperative structures responsible to them” (Waterbury 1986, p. 82). Such a cooperative organization would threaten several rural interest groups, among them clearly the *marabouts*. Therefore a compromise was sought. Features of the compromise included larger cooperatives (in Sine-Saloum, average membership rose from 200 to 1,730), little change in personnel and patrons who manage cooperatives, and the absence of grassroots participation in organizing the new cooperatives. As a result, the new cooperatives were unlikely to be any more successful than earlier ones.

Lessons from experience with cooperatives

Two conclusions emerge from the experience with marketing cooperatives in the MADIA countries. First, to serve their membership effectively—and thus be effective marketing institutions—cooperative must strike a delicate balance of state support and the absence of state intervention. Judging from the often disappointing performance of cooperatives, this blend is difficult to achieve. Support needs to be in the form of managerial assistance, training of officials, and ensuring compliance with bylaws. The delicate mix of adequate support and avoidance of excessive intervention hinges on how the objectives of the cooperative are defined and achieved. Typically, in situations where government sees cooperatives as policy tools and thus seeks to control operations, the nature of the cooperative is corrupted and benefits for members are eroded.

Second, given the general ingredients necessary for their success (from the point of view of members), cooperatives are not well suited to quickly supplementing or supplanting the operations of marketing boards or the private sector. A policy that seeks to maintain control of marketing functions by substituting cooperatives for marketing boards is not likely to be successful.

Agricultural Marketing Reforms: Overview of the Experience of MADIA Countries

The reform policies agreed to by donors and African governments, chiefly in the form of structural and sectoral adjustment loans made by the World Bank and supported by other donors, have contained numerous measures relating to pricing and marketing policy, including the reform of marketing parastatals. Although it is not possible to describe in detail the specifics of these reform policies for each of the MADIA countries, an overview will give the flavor of the relevant provisions.

A primary goal of adjustment programs has been to increase producer prices, both through adjustment of the exchange rate, where necessary (i.e., Nigeria and Tanzania), and through changes in official prices, mainly for export crops (see Table 1). (It has not been possible to adjust exchange rates in Senegal and Cameroon due to their membership in the franc zone.) Reducing the role of the public sector in agricultural marketing has also been an issue. Donors (chiefly the World Bank and USAID) have also addressed the pricing and marketing of inputs—primarily the policies governing the importation, domestic distribution, and subsidization of fertilizer (see Tables 6 and 7).¹⁸

It has been demonstrated elsewhere that the impetus for subsidy-removal programs has been generated by concern about budget deficits (Lele, Christiansen, and Kadiresan 1989; World Bank 1986b), the failure of subsidies to reach their intended beneficiaries, and the growth of the public sector.¹⁹ This comparatively narrow focus precluded analyzing the role of fertilizer subsidies in the broader context of the need for production intensification in African agriculture and the feasibility of the private sector's rapid replacement of the public sector. An analysis of these broader issues concluded that there is not a single solution to achieving the widespread use of fertilizer (Lele, Christiansen, and Kadiresan 1989). Fertilizer subsidies may be justified in specific cases, i.e., where there are clear market failures, or where fertilizer demand is constrained by low but positive returns, or by the low income of its users. Subsidies can be most effective if they are combined with the relaxation of supply constraints stemming from market imperfection, e.g., inadequate supply of foreign exchange or the absence of financial markets.

With respect to reform of agricultural marketing policies, provisions have included restructuring of the institutions responsible for input and output marketing, reducing the role of the public sector in marketing, and encouraging private-sector activity (see Tables 6 and 7).²⁰ This emphasis has prevailed even though little empirically based work is available on the structure and performance of private agricultural markets in Africa. At present, these markets are generally confined to food crops—since governments control the distribution and marketing of export crops. Even where the private sector is allowed to operate freely in marketing and agro-processing (e.g., cotton and rubber in Nigeria), trade by licensed buying agents is often alleged to be uncompetitive. Also under way are operations to improve the legal and institutional framework in which the private sector operates, as well as efforts to improve credit, information, and transport infrastructure.

In view of the extent to which donors historically supported the growth of the public sector, the current empha-

Table 6
Agricultural Pricing and Marketing Policy Reforms in Senegal, Cameroon, and Nigeria

Senegal	
Output prices:	Producer prices for groundnuts and cereals were increased. Further, the price of imported rice was to be increased to encourage domestic production.
Input prices:	The fertilizer subsidy provided by SONAR was replaced by a limited subsidy financed by donors which is to be gradually phased out by 1989. Regional fertilizer prices are to reflect transport costs.
Institutions:	The groundnut seed and fertilizer marketing parastatal (SONAR) was abolished in 1986 and responsibility for marketing groundnuts was transferred to the groundnut crushing firms, private traders, and cooperatives. Seed stocks were reduced and free distribution limited. Further, administrative barriers to the internal marketing of cereals were removed.
Privatization:	The elimination of SONAR shifted responsibility for marketing to the private sector and cooperatives.
Cameroon	
Output prices:	As part of the fertilizer subsidy removal program, government increased the producer price for coffee.
Input prices:	The fertilizer subsidy that was targeted at coffee producers is to be gradually eliminated by 1992.
Institutions:	A number of parastatals are to be abolished (e.g., SEMRY) or their role restructured; cooperatives are being promoted.
Privatization:	As part of the fertilizer reform package, the importation and distribution of fertilizer was privatized.
Nigeria	
Output prices:	Coincident with the abolition of marketing boards, the producer prices for exports crops increased.
Input prices:	Efforts to eliminate the fertilizer subsidy met with some success, however, more recently an implicit subsidy is paid due to currency overvaluation.
Institutions:	Export crop marketing boards were abolished.
Privatization:	Increased private sector activity in export crop trading has been accomplished and plans are underway to encourage private sector fertilizer trading.

sis on promoting the private sector without first insuring that the prerequisites for a successful private sector are in place represents a serious shortcoming in the reform process. The lack of detailed agreements with governments on precisely which areas they are willing to privatize has posed many problems. Moreover, the capacity of the private sector to utilize resources has been limited, and most donor officials have relatively little of the practical experience and knowledge required to strengthen the operations of the private sector. Instead, there is a tendency to assume that the private sector is active and strong and can quickly meet the challenge of agricultural marketing.

The Agricultural Sector Adjustment Operation (ASAO) in Kenya provides an example of some of the difficulties that arise from structural adjustment agreements that aim to

Table 7
Pricing and Marketing Policy Reforms in Malawi, Kenya, and Tanzania

Malawi	
Output prices:	Smallholder producer prices increased with the exception of tobacco.
Input prices:	Fertilizer subsidy was slated for removal but government abandoned the removal program in 1987.
Institutions:	The marketing parastatal (ADMARC) has been reformed to increase efficiency and focus more exclusively on smallholder agriculture.
Privatization:	The use of private traders to purchase selected smallholder output has been encouraged. There are plans to privatize the distribution of fertilizer.
Kenya	
Output prices:	Because smallholder producer prices have been kept close to international levels, recommendations have focused on other aspects.
Input prices:	Kenya has not had a fertilizer subsidy since the mid-1970s; its control of distribution and handling margins for a range of crops has been liberalized.
Institutions:	Implementation of parastatal reform programs along with further restructuring of the public investment and expenditure programs related to parastatals.
Privatization:	Efforts to improve the efficiency of fertilizer importation and distribution have been addressed through import liberalization and privatization.
Tanzania	
Output prices:	Substantial increases in official producer prices for food and export crops.
Input prices:	The explicit fertilizer subsidy was removed in 1984, but has been offset by pricing of grant-aid fertilizer and currency overvaluation.
Institutions:	The National Milling Corporation (NMC) has been restricted to a food security role and agricultural cooperatives have been introduced.
Privatization:	An increased role for the private sector in agricultural marketing has been encouraged.

reform marketing conditions and parastatals. The ASAO involved numerous conditions and subconditions related to restructuring parastatals—issues that donors and the Kenyan government have disputed for well over a decade (Lele and Meyers 1987). The difficulty exists in part because donors have confined their analysis to narrow technocratic or economic-efficiency criteria, with little explicit analysis of the *political* factors that affect decisions. Recent MADIA studies (of cotton and sugar in Kenya, and of fertilizers generally) provide examples of the political reasons why and how governments have pursued certain courses of action. They show the degree of detailed analysis that needs to be undertaken on both an issue-by-issue and a country-by-country basis. Several examples will help to illustrate the point.

In *Malawi*, policy reforms affecting the smallholder marketing parastatal ADMARC have concentrated on divestiture of assets not related to smallholder agriculture and enforcing the requirement that ADMARC operate on commercial criteria (a condition that has caused concern within the government and ADMARC about the ability to stabilize prices and act as the buyer/seller of last resort).

In addition, the privatization of grain trading was implemented with the intention of providing farmers with an alternative marketing channel and increasing the efficiency of crop procurement. Although the first buying season in which private traders participated under the new scheme (1987) coincided with a large influx of refugees and therefore increased demand for maize, implementation proceeded smoothly.²¹ Nonetheless, several issues need to be addressed before privatization can be said to have been successful. The increased demand for maize raised the market price above the official price, thereby causing the volume of ADMARC's purchases to fall considerably below the level of recent years. Although purchases increased somewhat in 1988, there is concern about ADMARC's ability to fulfill its mandate to achieve food security under these circumstances.

The two most serious problems facing private traders—transport constraints and lack of access to credit—have yet to be addressed. Without reliable transport and access to credit, private-sector performance will fall far short of expectations and will probably come to be dominated by the few traders who have access to these requirements. Finally, the privatization of grain marketing in Malawi—and the anticipated privatization of fertilizer marketing—has left ADMARC in the position of being held to commercial operational standards (i.e., no losses) while having responsibility for loss-making development functions without the anticipated government reimbursement. For example, ADMARC is expected to ensure national food security by holding stock at the Strategic Grain Reserve, yet it is expected to pay producer prices that preclude any taxation to finance the costs of its food-security and price-stabilization functions.²² Adequate capitalization and regular compensation for loss-making operations by the government may, however, turn out to be a problem elsewhere in East Africa.

Finally, as a part of the liberalization program, approximately 6 percent of seasonal markets were closed. The World Bank hoped to have nearly 200 markets closed in 1987/88, but it settled for about 125. At present, some 75-80 percent of the rural population is within eight kilometers of a seasonal market location. Given the political importance of seasonal markets, their closure was a contentious issue. Not surprisingly, by 1989/90 the closures had been more than offset by the new markets that ADMARC opened.

In summary, the privatization of smallholder-output marketing in Malawi has been generally successful, although the early performance of traders suffered somewhat from the rapid pace of implementation, and traders' activities are hindered by shortages of working capital and vehicles (Christiansen and Stackhouse 1989).

In *Tanzania*, various marketing reforms have been implemented since 1984, including the reintroduction of cooperatives, the abolition of crop-purchasing authorities (1984), a more tolerant attitude toward private traders (e.g., the elimination of restrictions on buying and transporting food grains), a more clearly defined and restricted role for the grain-marketing parastatal (NMC), and legalization of private-sector purchases from and sales to the NMC, cooperative unions, primary societies, and farmers (Scarborough 1989). A preliminary assessment shows that all these steps have had a very positive effect—as could be expected in a country that had been operating substantially below its production possibility. Once the effect of these initial

reforms is absorbed, however, Tanzania will encounter many of the problems concerning the appropriate roles of the private and public sectors that already confront other countries that did not deviate from growth as much as Tanzania. For instance, traders face a pervasive shortage of credit, information, and transportation. Any small increase in production causes substantial bottlenecks in movements of marketed output. The public sector role in improving the capacity of the private sector to undertake these tasks effectively, i.e., through the dissemination of market information, the provision of credit to traders, and the improvement of transport, is less developed in Tanzania than in Malawi, for example.

In *Senegal*, policy reforms have sought to enhance the economic environment through the liberalization of input and output markets. Although it is still early in the process of state disengagement from the marketing of fertilizer and groundnuts, distortions may be emerging in the private market. Following the liquidation of the marketing parastatal (ONCAD) in 1980, groundnut marketing was turned over to the groundnut-crushing firms, especially the *Société Nationale de Commercialisation des Oléagineux du Sénégal* (SONACOS), while management of the national seedstock became the responsibility of the *Société Nationale d'Approvisionnement du Monde Rural* (SONAR). Cooperatives became the agents for SONACOS, acting as intermediaries between the farmers and the groundnut-crushing firms. In 1986, due to financial losses among the crushing firms and a growing parallel trade in groundnuts, donor pressure led to the transfer of marketing to three agents: the cooperatives, the crushing firms, and private traders. However, SONACOS continued to regulate the system and to provide marketing finance, although cooperatives were free to trade and sell at retail. Critics of the reforms claim that the crushing firms still control the market and that financing is still only available through SONACOS (Jammeh 1987). For example, groundnut production, which was domestically marketed by nearly 2,500 cooperatives, is now channeled through a declining number of buying points—750 in 1988/89. Moreover, there are allegations that private traders (the *organismes privés stockeurs*) exercise monopsony power over the farmers (EIU 1989).

Another aspect of Senegal's experience with privatization has been the effort to privatize fertilizer distribution—largely because of concern about the corruption and weak performance that characterized marketing parastatals in Senegal. Even as this privatization initiative was being pursued, the attractiveness of fertilizer use diminished due to subsidy removal, the reduced availability of credit, and increased climatic variation. As a result, the private sector has been reluctant to make the necessary investment to become involved in fertilizer distribution. The lack of private sector participation combined with the public sector's inability (due to financial constraints) to function as a seller of last resort has meant that the distribution of fertilizer has suffered, which has contributed to the decline in fertilizer use (Lele, Christiansen, and Kadiresan 1989). Efforts to privatize cereal marketing, in which traders were allowed a more active role, have been successful in the Groundnut Basin, but less so in areas such as Casamance, where trade is less well developed. The stabilization of grain prices will remain an important issue in Senegal.

In *Nigeria*, marketing reforms have concentrated on privatization of export-crop marketing, since food-crop

marketing is already largely in the hands of the private sector. According to Lele (1989), the government's attempts to intervene in grain markets have met with little success because support prices have been well below market prices, and the capacity of the Nigerian public sector for managing price-support programs is weak. Export-crop marketing was a government monopoly until the end of 1986, when the relevant commodity boards were abolished as part of the structural adjustment program. Subsequent privatization of export-crop trading, combined with currency devaluation in October 1986, led to substantially higher producer prices for these crops.²³ However, privatization also led to problems of quality control, as a result of which Nigerian cocoa now sells at a discount. Interviews with cocoa buyers in London suggest that the poor-quality cocoa offered by Nigerian exporters interested only in short-term profit is a serious problem.

The privatization of fertilizer procurement and distribution has been an issue between the World Bank and the Nigerian government for several years. The issue is linked to the high rate of subsidy on fertilizer, which has in general precluded private trade. At present, there is a proposal to privatize the commercial supply companies of the multistate ADPs, which have operated as wholesalers. There is also a proposal to privatize retail fertilizer sales through encouragement of private traders and farmers' cooperatives. But cooperatives are weak in Nigeria, and the response of the private sector is yet to be seen.

In summary, the lesson that emerges from experience with privatization and liberalization efforts in the MADIA countries confirms the experience of other developing countries: The ability of the private sector to function effectively in the area of agricultural marketing depends on the environment in which traders must operate. This environment is defined by many of the elements whose absence in the past served as a rationale for public-sector intervention in the first place. These elements include:

- the presence of an entrepreneurial class able to undertake risk;
- competitive markets;
- adequate infrastructure, including transport and communication networks that allow the efficient movement of information, goods, and services;
- efficient markets for inputs and outputs (i.e., there are no market failures), including financial services; and
- food security.

Unfortunately, the public sector, due to its distrust of private markets and of ethnic domination, has concentrated on substituting for, rather than supplementing, the private sector. The result of this policy in most cases has been a lack of competition in the provision of marketing services that has contributed to inefficiency in marketing systems. This inefficiency, combined with a change in donor attitudes toward the public sector, has caused reform policy to encourage increased private-sector involvement in marketing. But too little attention has been paid to insuring the adequacy of the environment in which the private sector must operate. Reliance on markets alone will not necessarily ensure competitive pricing and marketing of crops where scale economies exist, food security, or timely availability of inputs.

Summary of Conclusions and Implications

Although public sector intervention in agricultural marketing is closely linked to the nature of agricultural production and the processing requirements of crops, its implementation is frequently based on political objectives. The marketing arrangements that many African countries inherited from the colonial era were heavily influenced by the economic interests of expatriate farmers and traders. During the colonial period, the public sector intervened in agricultural markets to impose order on a seemingly chaotic marketing system, to create economic rents for European trading companies and estates, and to generate revenues for the public sector. To preserve the benefits derived from state-dominated marketing structures, many of the independent African governments retained the marketing boards and parastatals bequeathed by the colonial governments. Thus, newly dominant groups came to direct marketing policy and institutions. In this new context, market intervention increasingly came to be seen as a means of ensuring food security, enabling the government to perform development functions, stimulating agricultural production, maintaining control over politically strategic commodities, and providing a source of political patronage.

Government interventions in the operations of marketing boards and cooperatives have however, often adversely affected the efficiency of these agencies. Although there is a tendency to assume that the failure of many parastatals is due to their inherent inefficiencies, the sources of these inefficiencies often lie beyond the control of the parastatals themselves—e.g., in pressure from the government to overstaff as a form of political patronage or to perform development functions without remuneration.

Many of the policy reforms that pertain to agricultural marketing undertaken by African governments during the 1980s have emphasized the need to improve parastatal performance through a combination of restructuring, greater emphasis on commercial criteria, and privatization. This emphasis frequently requires that part or all of the agency in question be privatized and that the losses of these operations that remain in the public sector be minimized or eliminated. Since extensive public sector control has been crucial to maintaining control over important marketing functions, most African governments have been reluctant to allow anything other than selective and closely regulated private sector involvement in agricultural marketing. Given the importance of parastatals—and even cooperatives—as institutions that can extend the political and economic power of governments, it is unlikely that governments will completely relinquish the right to intervene in agricultural markets.

Despite their political nature, marketing organizations need to perform legitimate economic functions including:

- reducing the inherent riskiness of agriculture for small-scale farmers;
- ensuring markets and input supply to promote price stability;
- providing revenues for the public sector;
- supporting large-scale investments in processing that the private sector is unwilling or unable to attempt;
- addressing the constraints imposed by inadequate financial markets;
- creating demand for inputs; and
- assuring supply of food and inputs to low-income households in remote regions, that might not otherwise be reached.

The experience with public sector intervention in agricultural marketing in the MADIA countries indicates a clear need for institutional pluralism in fostering competition. The private sector can provide increased competition and can perform some tasks more efficiently than parastatals, but if the private sector is to operate effectively, the public sector must first ensure that certain requirements have been met. These requirements include:

- stimulating the development of an entrepreneurial class capable of undertaking risk;
- encouraging free entry into markets;
- creating adequate infrastructure, transport, and communication networks for the efficient movement of goods; and
- promoting efficient financial markets that are able to support commodity markets.

With respect to the role of cooperatives, the experience of the MADIA study countries indicates that successful cooperatives have two—often opposing—requirements: The first is the capability to independently and effectively represent the interests of their memberships. It is abundantly clear that cooperatives cannot be used as substitutes for parastatals—with the public sector controlling their operations—since cooperatives by their nature require active and democratic grassroots participation. (Governments are of course often fearful of the political power of such cooperatives and therefore reluctant to encourage grassroots arrangements). Second, cooperatives need public support to deal with the complex organizational, technological, and financial requirements of modern cooperative management.

In Africa, privatization has not been preceded by the strengthening of the private sector or the establishment of legal and other institutions (e.g., standardization of weights and measures, collection and dissemination of market information, availability of credit to traders, transporters, wholesalers, and retailers). Thoughtful and long-term donor assistance to the private sector is required in transport, communication, information, and credit to contribute to the decentralization of economic and political power. The issue of timing will be critical to the development of efficient and effective marketing systems and will determine whether the private sector will be competitive or will merely replace public sector oligopolies while continuing to serve the same vested interests. Thus far, donors have tended to be naive about the appropriate extent and pace of privatization, especially given that the interests in public sector operations, which they supported, have become entrenched.

The implication of these findings for donors is that, although the perception of parastatals as politicized and inefficient is correct, it is not sufficient to sponsor reforms that in effect expect the private sector to address even a majority of agricultural marketing needs. Policies must be devised that continue to encourage the private sector even

while depoliticizing parastatal operations so as to enhance competition while development requirements are met. This means defining the appropriate role of the public sector in terms of the circumstances in which public support and regulation is required to ensure a competitive environment, and intervention is needed to provide services that the private sector is unwilling or unable to provide. Assuring agricultural growth with development in Africa will continue to make it necessary:

- (1) to assist producers in confronting the risks associated with rainfed agriculture as practiced in Africa,
- (2) establish an environment where capital and technological inputs are readily available, and
- (3) act as a buyer and seller of last resort even while protecting consumers, particularly low-income consumers, from wide price fluctuations.

A limited amount of market intervention will necessarily be part of any overall agricultural strategy. Progress will in all likelihood be slow: Donors must recognize and take into account major differences among and within countries in attempting to play a useful role in developing appropriate marketing institutions and arrangements that include both the private and public sectors.

Bibliography

- ADMARC. Various dates. "Annual Accounts and Report for the Year Ended 31st March." Blantyre, Malawi: Ministry of Agriculture, 1972-1987.
- Adams, D.W. 1978. "Mobilizing Household Savings Through Rural Financial Markets." *Economic Development and Cultural Change* 26, no. 3 (April): 547-60.
- Alila, Patrick O. 1985. "Administration of Cooperatives for Rural Development in Kenya." In *Challenging Rural Poverty*, edited by Fassil G. Kiros, 169-182. Trenton, NJ: Africa World Press.
- Avramovic, Dragoslav. 1987. "Commodity Problems: What Next?" *World Development* 15, no. 5 (May): 645-655.
- Babin, D. 1988. "The World Bank and the IMF: Rolling Back the State or Backing its Role?" In *The Promise of Privatization*, edited by Raymond Vernon. Washington, D.C.: Council on Foreign Relations.
- Balcet, J.C. and Wilfred Candler. 1982. *Farm Technology Adoption in Northern Nigeria*. Washington, D.C.: World Bank.
- Bates, Robert H. 1981. *Markets and States in Tropical Africa: The Political Basis of Agricultural Policies*. Berkeley: University of California Press.
- . 1983. "Patterns of Market Intervention in Agrarian Africa." *Food Policy* 8, no. 4 (November).
- . 1989. "Politics and Agriculture in Kenya." In *The Politics of Agricultural Policy in Africa*, edited by Uma Lele and Ellen Hanak. Washington, D.C.: World Bank (forthcoming).
- Bauer, P.T. 1967. *West African Trade: A Study of Competition, Oligopoly and Monopoly in a Changing Economy*. New York: Augustus M. Kelley.
- Behrman, Jere R. 1987. "Commodity Price Instability and Economic Goal Attainment in Developing Countries." *World Development* 15, no. 5 (May): 559-573.
- Bienen, Henry. 1986. "Politics and Agricultural Policy in Nigeria." in *The Politics of Agricultural Policy in Africa*, edited by Uma Lele and Ellen Hanak. Washington, D.C.: World Bank (forthcoming).
- Bingen, R. James. 1987. "An Orientation to Production Systems Research in Senegal." MSU *International Development Papers*. Reprint no. 16.
- Bowbrick, Peter. 1988. "An Economic Analysis of the Impact of Private Traders on Agricultural Marketing." Lilongwe, Malawi: Planning Division, Ministry of Agriculture.
- Bryceson, Deborah Fahy. 1985. "The Organization of Tanzanian Grain Marketing: Switching Roles of the Co-operative and the Parastatal." In *Marketing Boards in Tropical Africa*, edited by Kwame Arhin, Paul Hesp, and Laurens van der Laan, 53-78. London: KPI.
- . n.d. "Second Thoughts on Marketing Co-operatives in Tanzania: Background to Their Reinstatement." Plunkett Development Series 5.
- Candler, Wilfred. 1986. "Tanzania: Notes on the Development of Marketing and Price Policy: 1961-1986." MADIA Working Paper. Washington, D.C.: World Bank.
- Christiansen, Robert E. and V. Roy Southworth. 1988. "Agricultural Pricing and Marketing Policy in Malawi: Implications for a Development Strategy." Paper presented at the "Symposium on Agricultural Policies for Growth and Development" at Mangochi, Malawi, October 31 to November 4.
- and J.G. Kydd. 1987. "The Political Economy of Agricultural Policy Formulation in Malawi, 1960-1985." in *The Politics of Agricultural Policy in Africa*, edited by Uma Lele and Ellen Hanak. Washington, D.C.: World Bank (forthcoming).
- and Lee Ann Stackhouse. 1989. "The Privatization of Agricultural Marketing in Malawi." *World Development* 17, no. 5 (May): 729-740.
- Cleaver, Kevin and Mike Westlake. 1987. "Pricing, Marketing and Agricultural Development in Kenya." MADIA Working Paper. Washington, D.C.: World Bank.
- Clough, Paul. 1985. "The Social Relations of Grain Marketing in Northern Nigeria." *Review of African Political Economy* 34 (December): 16-34.
- Collinson, M. 1972. *Farm Management in Peasant Agriculture*. Boulder, CO: Westview Press.
- Coopers and Lybrand Associates. 1987. "NCPB Reorganization Study." Vol. 6. Washington, D.C.
- COPAC. n.d. "Cooperative Information Note: Republic of Kenya." No. 2 Revised.
- . n.d. "Cooperative Information Note: Republic of Tanzania." No. 5 (1st Revision).
- Cox, Pamela M.J. 1984. "Implementing Agricultural Development Policy in Kenya." *Food Research Institute Studies* 19, no. 2: 153-176.
- de Wilde, J.C. 1967. *Experiences with Agricultural Development in Tropical Africa*. Baltimore: Johns Hopkins University Press.
- Deaton, Angus. 1987. "The Demand for Personal Travel in Developing Countries." Infrastructure and Urban Development Discussion Paper. Washington, D.C.: World Bank.
- Deloitte, Haskins, and Sells. 1987. "Agricultural Development and Marketing Corporation Organisation and Management Review." Lilongwe, Malawi.
- Economist Intelligence Unit. 1989. Country Report: Senegal, Gambia, Guinea Bissau, Cape Verde. No. 1.
- Eicher, Carl K. 1982. "Facing Up to Africa's Food Crisis." *Foreign Affairs* 61 (Fall): 151-174.
- Ellis, Frank. 1983. "Agricultural Marketing and Peasant-State Transfers in Tanzania." *Journal of Peasant Studies* 10 (July): 214-242.
- FAO/World Bank. 1987. "Agricultural Cooperatives in Tanzania." Agricultural Sector Review Mission, Working Paper 5. Rome: FAO (July).
- Gaviria, Juan. Forthcoming. "The Role of Transportation in Agricultural Performance in Cameroon." MADIA Working Paper. Washington, D.C.: World Bank.
- . Forthcoming. "The Role of Transportation in Agricultural Performance in Malawi." MADIA Working Paper. Washington, D.C.: World Bank.
- German Agency for Technical Cooperation (GTZ). 1986. "Rehabilitation of the Cocoa Marketing Cooperatives in the Central-Southern Region of Cameroon." Provisional Final Report (November).
- Gilbert, Christopher L. 1986. "Commodity Price Stabilization: The Massell Model and Multiplicative Disturbances." *The Quarterly Journal of Economics* (August).
- Government of Kenya. Various dates. *Economic Surveys*. Nairobi, Kenya, 1970-1985.
- Government of Kenya, Ministry of Agriculture. 1987. Mimeographed sheets. Nairobi, Kenya.
- Government of Malawi, Ministry of Agriculture. 1988. Mimeographed sheets. Malawi.
- Grosh, Barbara Ann. 1988. "Improving the Economic Performance of Public Enterprises in Kenya: Lessons from the First Two Decades of Independence." Ph.D. diss., University of California-Berkeley.
- Gulhati, Ravi. 1988. "The Political Economy of Reform in Sub-Saharan Africa." Economic Development Institute of the World Bank. Washington, D.C.: World Bank.

- Hanak, Ellen. 1989. "The Politics of Agricultural Policy in Tanzania." in *The Politics of Agricultural Policy in Africa*, edited by Uma Lele and Ellen Hanak. Washington, D.C.: World Bank (forthcoming).
- and Michael Loft. 1987. "Danish Development Assistance to Tanzania and Kenya, 1962-1985: Its Contribution to Agricultural Development." MADIA Working Paper. Washington, D.C.: World Bank.
- Harrison, Kelly, Donald Henley, Harold Riley, and James Shaffer. 1987. "Improving Food Marketing Systems in Developing Countries: Experiences from Latin America." MSU International Development Papers. Reprint no. 9.
- Harriss, Barbara. 1981. "Some Lessons from the History of Internal Trade in the Interior of West Africa." Discussion Paper no. 105. Institute of Development Studies (December).
- Hesp, Paul and Laurens van der Laan. 1985. "Marketing Boards in Tropical Africa: A Survey." In *Marketing Boards in Tropical Africa*, edited by Kwame Arhin, Paul Hesp, and Laurens van der Laan. London: KPI.
- Higgins, G.M. 1982. *Potential Population Supporting Capacities of Lands in the Developing World*. A technical report of the project, "Land Resources for Populations of the Future." Rome: FAO/International Institute for Applied Systems Analysis.
- International Labor Organization. 1988. "A Review of Co-operative Development in the African Region: Scope, Impact and Prospects." Report prepared for the 7th African Regional Conference.
- International Monetary Fund. 1987. *International Financial Statistics Statistical Yearbook*. Washington, D.C.: International Monetary Fund.
- International Fertilizer Development Center. 1986. "Cameroon Fertilizer Sector Study." Muscle Shoals, Alabama: International Fertilizer Development Center.
- International Finance Corporation. 1989. "Lessons from IFC's Experience in the Agricultural Production Sub-Sector." Washington, D.C.: International Finance Corporation.
- Jammeh, Sidi C. 1985. "The Evolution of Marketing and Pricing Policy in Senegal." MADIA Working Paper. Washington, D.C.: World Bank.
- . 1987. *State Intervention in Agricultural Pricing and Marketing in Senegal*. Ph.D. diss., Johns Hopkins University.
- and C.G. Ranade. 1986. "Agricultural Pricing and Marketing in Senegal." MADIA Working Paper. Washington, D.C.: World Bank.
- and Uma Lele. 1988. "Building Agricultural Research Capacity in Senegal." MADIA Working Paper. Washington, D.C.: World Bank.
- Johnson, D. Gale. 1947. *Forward Prices for Agriculture*. Chicago: University of Chicago Press.
- Jolly, C.M., M. Kamuanga, S. Sall, and J.L. Posner. 1988. "Farm Level Cereal Situation in Lower Casamance: Results of a Field Study." MSU International Development Series. Reprint no. 27.
- Jones, William O. 1987. "Food-Crop Marketing Boards in Tropical Africa." *Journal of Modern African Studies* 25 (September): 375-402.
- Kaberuka, D.P. 1984. "Evaluating the Performance of Food Marketing Parastatals." *Development Review Policy* 2: 190-216.
- Kaldor, Nicholas. 1987. "The Role of Commodity Prices in Economic Recovery." *World Development* 15, no. 5: 551-558.
- Kanbur, S.M. Ravi. 1983. "How to Analyze Commodity Price Stabilization?" Discussion Paper 35 (August).
- Keene, Monk and Associates, Inc. 1984. "Agricultural Parastatals." A report prepared for USAID, PPC/PDPR (September).
- Kelly, Valerie Auserehl. 1988. "Acquisition and Use of Agricultural Inputs in the Context of Senegal's New Agricultural Policy: The Implications of Farmer's Attitudes and Input Purchasing Behavior for the Design of Agricultural Policy and Research Programs." MSU International Development Papers. Reprint no. 18.
- Kooten, G.C. and Andrew Schmitz. 1985. "Commodity Price Stabilization: The Price Uncertainty Case." *Canadian Journal of Economics* 2 (May).
- Kuhn, Johannes and Heinz Stoffregen. 1975. "How to Measure the Efficiency of Agricultural Cooperatives in Developing Countries. Case Study— Kenya." Rome: FAO.
- Lamb, Geoffrey and Linda Muller. 1982. "Control, Accountability, and Incentives in a Successful Development Institution: The Kenya Tea Development Authority." World Bank Staff Working Papers no. 550. Washington, D.C.: World Bank.
- Lele, Uma. 1985. "Agricultural Growth, Domestic Policies, the External Environment and Assistance to Africa: Lessons of a Quarter Century." In *Trade, Aid, and Policy Reform: Proceedings of the Eighth Agriculture Sector Symposium*, edited by Colleen Roberts. Washington, D.C.: World Bank.
- . 1987. "Agriculture and Infrastructure." Paper prepared for "Symposium on Transportation and Structural Adjustment," Transportation Department, World Bank, Baltimore, MD, May 6-8.
- . 1988. "Comparative Advantage and Structural Transformation: A Review of Africa's Economic Development Experience." In *The State of Development Economics: Progress and Perspectives*, edited by Gustav Ranis and T. Paul Schultz. New York: Basil Blackwell, Inc.
- . 1977. "Considerations Related to Optimum Pricing and Marketing Strategies in Rural Development." In *Decision-Making and Agriculture*, edited by Dams and Hunt. Lincoln: University of Nebraska Press.
- . 1981. "Cooperatives and the Poor: A Comparative Perspective." *World Development* 9: 55-72.
- . 1979. *The Design of Rural Development: Lessons from Africa*. Baltimore: Johns Hopkins University Press.
- . 1971. *Food Grain Marketing in India: Private Performance and Public Policy*. Ithaca: Cornell University Press.
- . 1989a. "Sources of Growth in East African Agriculture." *The World Bank Economic Review* 3, no. 1 (January): 119-144.
- . 1989b. "Structural Adjustment, Agricultural Development, and the Poor: Some Lessons from the Malawian Experience." *World Development*. Forthcoming.
- and L. Richard Meyers. 1986. "Agricultural Development and Foreign Assistance: A Review of the World Bank's Experience in Kenya, 1963 to 1986." MADIA Working Paper. Washington, D.C.: World Bank.
- and Rahul Jain. 1989. "Synthesis: Aid to African Agriculture—Lessons from Two Decades of Donor Experience." In *Aid to African Agriculture: Lessons from Two Decades of Donor Experience*, edited by Uma Lele. Forthcoming. Washington, D.C.: World Bank.
- and Wilfred Candler. 1981. "Food Security: Some East African Considerations." In *Food Security for Developing Countries*, edited by Alberto Valdes. Boulder, CO: Westview Press.
- , Ademola Oyejide, Vishva Bindlish, and Balu Bumb. 1989. *Nigeria's Economic Development, Agriculture's Role, and World Bank Assistance, 1961-88: Lessons for the Future*. Washington, D.C.: World Bank.
- , Nicolas van de Walle, and Mathurin Gbetibouo. 1989. "Cotton in Africa: An Analysis of Differences in Performance." MADIA Working Paper. Washington, D.C.: World Bank.

- _____ and L. Richard Meyers. 1987. "Growth and Structural Change in East Africa: Domestic Policies, Agricultural Performance, and World Bank Assistance, 1963-1986." Parts I and II. DRD Discussion Paper nos. 273 and 274. Washington, D.C.: World Bank.
- _____ and Steven Stone. 1989. "Population Pressure, the Environment, and Agricultural Intensification: Variations on the Boserup Hypothesis." MADIA Working Paper. Washington, D.C.: World Bank.
- _____ and Manmohan Agarwal. 1989. "Smallholder and Large-Scale Agriculture: Are There Trade-offs in Growth and Equity?" MADIA Working Paper. Washington, D.C.: World Bank.
- _____, Robert E. Christiansen, and Kundhavi Kadiresan. 1989. "Issues in Fertilizer Policy in Africa: Lessons from Development Programs and Adjustment Lending, 1970-87." MADIA Working Paper. Washington, D.C.: World Bank.
- Lindauer, David L., Oey Astra Meesook, and Parita Suebsaeng. 1988. "Government Wage Policy in Africa: Some Findings and Policy Issues." *The World Bank Research Observer* 9 (January): 1-26.
- Lipton, Michael. 1983. "Is Increased Agricultural Marketing Good for the Rural Poor?" *Development Research Digest* 10 (Winter): 55-59.
- Macbean, Alastair and Ductin Nguyen. 1987. "International Commodity Agreements: Shadow and Substance." *World Development* 15, no. 5: 575-590.
- MacKenzie, Richard B. and Gordon Tullock. 1981. *The New World of Economics*. Homewood, IL: Richard D. Irwin, Inc.
- Maizels, Alfred. 1987. "Commodities in Crisis: An Overview of the Main Issues." *World Development* 15, no. 5: 537-549.
- Meagher, Kate. 1988. "The Market in the Lived Economy: A Report on the Dynamic of Official and Parallel Market Activities in Arua District, Uganda." University of Sussex (November).
- Mellor, John W. 1978. "Food Price Policy and Income Distribution in Low Income Countries." *Economic Development and Cultural Change* 27 (October).
- Morris, Michael. 1988. "Étude sur la Commercialisation des Céréales dans la Région du Fleuve Sénégal: Methodologie." MSU International Development Series. Reprint no. 25F.
- Mosley, Paul. 1984. "The Politics of Economic Liberalisation: USAID and the World Bank in Kenya, 1980-84." Working Paper no. 30. University of Bath (December).
- Newbery, David M.G. and Joseph E. Stiglitz. 1981. *The Theory of Commodity Price Stabilization: A Study in the Economics of Risk*. Oxford: Clarendon Press.
- Newman, Mark D. 1987. "Grain Marketing in Senegal's Peanut Basin: 1984/85 Situation and Issues." MSU International Development Papers. Reprint no. 14.
- _____. 1987. "Tradeoffs Between Domestic and Imported Cereals in Senegal: A Marketing Systems Perspective." MSU International Development Papers. Reprint no. 15.
- _____, P. Alassane Sow, and Ousseynou Ndoye. 1988. "Regulatory Uncertainty and Government Objectives for the Organization and Performance of Cereal Markets: The Case of Senegal." MSU International Development Papers. Reprint no. 24.
- Paul, Samuel. 1982. *Managing Development Programs: The Lessons of Success*. Boulder, CO: Westview Press.
- Pinckney, Thomas C. III. 1986. "Production Instability and Food Security in Kenya: Measuring Trade Between Government Objectives." Ph.D. diss., Stanford University.
- Quinn, Victoria, Mabel Cuiligo, and J. Price Gittinger. 1988. "Household Food and Nutritional Security in Malawi." Paper presented at the "Symposium on Agricultural Policies for Growth and Development" at Mangochi, Malawi, October 31 to November 4.
- R.R. Nathan Associates. 1987. "The Impact of the Fertilizer Subsidy Removal Program on Smallholder Agriculture in Malawi." Washington, D.C.
- Ruthenberg, H. 1960. *Farming Systems in the Tropics*. Oxford: Clarendon Press.
- Scarborough, V. 1989. "The Current Status of Food Marketing in Tanzania." Unpublished paper.
- Schultz, T.W. 1945. *Agriculture in an Unstable Economy*. New York and London: McGraw Hill.
- Siamwalla, Ammar. 1982. "Security of Rice Supplies in the ASEAN Region." In *Food Security for Developing Countries*, edited by Alberto Valdes. Boulder, CO: Westview Press.
- Southworth, H.W. and B.F. Johnston. 1967. *Agricultural Development and Economic Growth*. Ithaca: Cornell University Press.
- Speirs, Mike. 1989. "Peasants, Merchants and the State—Some Reflections on Cereals Policies in Burkina Faso." Economics Institute, Royal Veterinary and Agricultural University, Copenhagen (February).
- von Pischke, J.D. 1980. "The Political Economy of Specialized Farm Credit Institutions." World Bank Working Paper no. 446. Washington, D.C.: World Bank.
- Wahab, Indra. 1985. "Effects of Price Stabilization on Export Revenue Instability of the Individual Countries." *Trade and Development* 6: 17-46.
- Waterbury, John. 1986. "Agricultural Policy Making and Stagnation in Senegal." in *The Politics of Agricultural Policy in Africa*, edited by Uma Lele and Ellen Hanak. Washington, D.C.: World Bank (forthcoming).
- Wellisz, Stanislaw and Ronald Findlay. 1988. "The State and the Invisible Hand." *The World Bank Research Observer* 3 (January): 59-80.
- Williams, Gavin. 1985. "Marketing Without and With Marketing Boards: The Origins of State Marketing Boards in Nigeria." *Review of African Political Economy* 34 (December): 4-15.
- Wolf, Thomas. 1986. "State Intervention at the Cabbage-Roots: A Case Study from Kenya." *IDS Bulletin* 17, no.1: 47-50.
- World Bank. 1988. "Agricultural Marketing: World Bank's Experience." Report no. 7353. Washington, D.C.: World Bank.
- World Bank. 1986a. "Improving Agricultural Marketing and Food Security Policies and Organization—A Reform Proposal." Report no. 6083- MAI. Washington, D.C.: World Bank.
- World Bank. 1986b. *World Development Report, 1986*. New York: Oxford University Press.
- World Bank. 1981. "Malawi: The Development of the Agricultural Sector." Report no. 3459-MAI. Washington, D.C.: World Bank.
- World Bank. 1986c. *Tanzania Agricultural Sector Mission: Technical Papers*. Rome: FAO/World Bank Cooperative Programme Investment Centre.
- World Bank, Eastern Africa Projects Department, Southern Agriculture Division. 1983. "Tanzania Agricultural Sector Report." Report no. 4052-TA. Washington, D.C.: World Bank.

Appendix

Total and per ton ADMARC marketing costs, 1972/73-1986/87

	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	Average
Total Crop Purchases								
(M. Ton)	185,269	162,140	170,300	117,900	181,300	192,176	223,391	
('000 Kwacha)	16,477	14,343	17,179	20,458	23,042	25,477	30,522	
Direct Costs¹								
('000 Kwacha)	6,595	8,307	9,291	9,710	12,603	15,364	16,105	
(Kwacha/M. Ton)	35.60	51.23	54.56	82.36	69.51	79.95	72.09	63.61
Administrative Costs								
('000 Kwacha)	858	1,448	1,281	1,859	2,527	3,427	4,106	
(Kwacha/M. Ton)	4.63	8.93	7.52	15.77	13.94	17.83	18.38	12.43
Finance Costs								
('000 Kwacha)	132	98	1,032	2,015	2,522	3,075	2,996	
(Kwacha/M. Ton)	0.71	0.60	6.06	17.09	13.91	16.00	13.41	9.68
Total Marketing Costs								
('000 Kwacha)	7,585	9,853	11,604	13,584	17,652	21,866	23,207	
(Kwacha/M. Ton)	40.94	60.77	68.14	115.22	97.36	113.78	103.89	85.73

	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	Average
Total Crop Purchases									
(M. Ton)	182,380	192,149	215,796	303,841	292,849	377,342	374,245	242,000	
('000 Kwacha)	28,238	29,900	28,859	41,940	46,048	74,262	88,544	90,585	
Direct Costs¹									
('000 Kwacha)	21,235	23,698	22,573	21,314	28,269	43,482	42,458	48,233	
(Kwacha/M. Ton)	116.43	123.33	104.60	70.15	96.53	115.23	113.45	199.31	117.38
Administrative Costs									
('000 Kwacha)	4,821	5,874	6,363	6,758	6,624	8,901	9,091	11,905	
(Kwacha/M. Ton)	26.43	30.57	29.49	22.24	22.62	23.59	24.29	49.19	28.55
Finance Costs									
('000 Kwacha)	4,246	6,530	6,236	9,270	6,782	6,464	4,054	11,591	
(Kwacha/M. Ton)	23.28	33.98	28.90	30.51	23.16	17.13	10.83	47.90	26.96
Total Marketing Costs									
('000 Kwacha)	30,302	36,102	35,172	37,342	41,675	58,847	55,603	71,729	
(Kwacha/M. Ton)	166.15	187.89	162.99	122.90	142.31	155.95	148.57	296.40	172.89

Notes:

¹ Direct costs are the sum of "total selling expenses" and "total buying and direct expenses," which include transport and packing costs, auction floor charges, insurance, marketing costs, depot and storage costs grading, ginning and milling costs, fumigation costs, and seed distribution costs.

² ADMARC data on volume of crop purchases, before 1979/80 were converted from short tons to metric tons by multiplying by 1.102.

³ Finance costs are listed as "interest payable" on the ADMARC Profit and Loss Accounts and include interest paid on long-term borrowings, bank overdrafts, and other. Sources: ADMARC 1972-87, except for total purchases for 1986/87 from Deloitte, Haskins, and Sells 1987, and marketing costs for 1974/75-1977/78 from World Bank 1986a.

Notes

1. Another MADIA paper has examined input pricing, specifically fertilizer pricing policy, in great detail. See Lele, Christiansen, and Kadiresan 1989.
2. The same phenomenon operated in India during the colonial and postcolonial period (see Lele 1971).
3. See Schultz 1945 and Johnson 1947.
4. The availability of imported food, and therefore the reliability of supplies of food for farmers dependent on the market, can be jeopardized by shortages of foreign exchange and the vagaries of donor food supplies (Lele 1985, p. 200). Shortages of foreign exchange are common, given the volatility of primary commodity markets, on which most African countries rely for much of their foreign exchange earnings and employment. For a detailed discussion of the degree of dependence on agriculture as a source of foreign exchange and employment, see Lele 1985.
5. An additional production-oriented argument for price stabilization has been made in the context of correcting the domestic terms of trade for agriculture in order to encourage long-term growth. While improvement in the terms of trade in favor of agriculture may induce some immediate aggregate supply response, a sustained response cannot depend on continued price increases: "...upward price adjustments cannot be expected to continue once the initial price distortions have been corrected, especially in view of the limited international market prospects for many of Africa's traditional export and food crops. Once the price distortions are corrected, important issues regarding long-term agricultural growth relate more to the stability of the pricing environment" (Lele 1985, p. 209).
6. Despite the massive donor assistance to parastatals, effort on the part of donors to collect data that would help to identify the true sources and causes of parastatal inefficiency have been weak. Although there are exceptions, e.g., a World Bank effort to establish a capacity in the Marketing Development Bureau in Tanzania. MDB had developed by far the most complete accounting picture of the major parastatals as a basis for providing governments with advice on price and marketing development policy.
7. See Lele, van de Walle, and Gbetibouo 1989 for an analysis of the problems with the Cotton Lint and Seed Marketing Board (CLSMB) in Kenya. The mediocre performance of CLSMB can be attributed to a number of factors, ranging from complex technological problems and poor management to the historical lack of political clout of cotton producers relative to those of tea and coffee. Despite considerable evidence of the government's commitment to support cooperatives, some argue that more recently government has put the interests of powerful economic groups ahead of its general policy of support for cooperatives (Wolf 1986, p.50).
8. Grosh uses four different measures of performance to evaluate public enterprises: (1) financial rate of return or profitability; (2) efficiency measured in terms of good service, low unit cost of margins, rational resource allocation, and returns to employees; (3) returns to consumers, which is measured by comparing actual prices with opportunity costs—for tradable goods this opportunity cost is measured by the relevant international parity price; and (4) returns to suppliers. This indicator also compares actual prices with opportunity costs (Grosh 1988, pp. 40-45).
9. Total marketing costs plus the value of payments to producers equals the total expenses. *Direct costs* are the sum of selling, buying, and direct expenses from ADMARC's trading accounts. These costs include transport, packing, and storage costs; auction floor charges; insurance; marketing costs; grading, ginning, milling, and fumigation costs; and seed distribution costs. *Administrative costs* are comprised of expenses incurred by ADMARC's head offices, such as salaries and travel expenses of central office staff, legal and professional fees, rent, and insurance costs. *Finance costs* consist of interest payable on long-term loans and bank overdrafts.
10. For the period 1978/79-1980/81 the average size of ADMARC's bank overdraft was K 2.5 million, or K 12.6 per ton of purchases, as compared to K 21.2 million, or K 64 per ton of purchases, for the 1984/85-1986/87 period.
11. The problems that ADMARC has suffered in this regard can have serious consequences for farmers' confidence in the marketing parastatal and, therefore, in their willingness to rely on markets for food supplies. For an account of the impact of delays in ADMARC's purchases, see R. R. Nathan Associates (1987).
12. The oil palm projects in Cameroon show a similar pattern of social services to employees that extended to the whole township (Lele, van de Walle, Gbetibouo 1989).
13. For more detailed accounts of the role of institutions in agriculture, see Lele, van de Walle, and Gbetibouo 1989; Lele, Christiansen, and Kadiresan 1989; Jammeh and Lele 1989; and Lele, Oyejide, et al. 1989.
14. Providing a universally accepted definition of a cooperative is difficult. The International Labor Organization (ILO) cites the following somewhat narrow definition:
...an association of persons, who have voluntarily joined together to achieve a common end through the formation of a democratically controlled organisation, making equitable contributions to the capital required and accepting a fair share of the risks and benefits of the undertaking in which the members actively participate (ILO 1988, p.15).
In addition, the 23rd Congress of the International Cooperative Alliance, held in 1966, adopted the following six principles of cooperatives, adherence to the first four of which is necessary for membership in the Alliance:
(i) voluntary and open membership; (ii) equal rights of voting for members, i.e. one member, one vote; (iii) limited interest on share capital, if any; (iv) equitable distribution of the economic results arising out of the operations of the society; (v) constitution of provisions for the education of members, officers, employees and the general public; (vi) co-operation between co-operatives (ILO 1988, p.19).

15. With regard to the impact of state intervention on the operation of cooperatives, the ILO argues that:

There is ample evidence that co-operatives are becoming increasingly subject to government intervention and in some countries are completely controlled by the State. The danger of increased government intervention or control is that emerging co-operatives may not be geared to the problems of their members but to pre-established government policies: in other words, that co-operatives may become a government instrument and not an instrument of self-help of the people (ILO 1988, p.27).

16. Part of the reason for continued state support of cooperatives after independence was that expansion of the cooperative movement provided a means of pushing Asian traders out of the rural sector (Bryceson n.d., p.5).

17. The average size of a credit union is approximately 268 members while that of a cocoa marketing cooperative is about 800.

18. For a detailed account of the level of fertilizer subsidies, fiscal cost, the cost of nutrients relative to output prices in the MADIA countries, see Lele, Christiansen, and Kadiresan 1989.

19. Among the MADIA countries, Nigeria is an extreme case as regards the costs of a fertilizer subsidy—in 1985 the subsidy cost US\$240.9 million, which was 32.1 percent of the agricultural budget and 3.7 percent of the total budget (Lele, Christiansen, and Kadiresan 1989).

20. For an excellent survey of the literature and the evolution of issues concerning privatization see van de Walle (1989).

21. See Christiansen and Stackhouse 1989; Lele 1989b; and Bowbrick 1988.

22. Historically ADMARC has financed its loss on the maize trading account through a subsidy from the profits earned on tobacco and groundnut trading. Recent price increases for these commodities precludes this method of financing in the future.

23. For example, the producer price of cocoa increased by 180 percent from 1,600 naira per metric ton in 1986 to 4,500 naira immediately following the devaluation. It increased further to 6,500 naira per metric ton in mid-1988, and to 12,000 naira by the end of 1988.

List of MADIA Discussion Paper Series

- Lele, Uma. "Agricultural Growth, Domestic Policies, the External Environment, and Assistance to Africa: Lessons of a Quarter Century." MADIA Discussion Paper No. 1. Washington, D.C.: World Bank, 1989.
- Lele, Uma. "Managing Agricultural Development in Africa: Three Articles on Lessons from Experience." MADIA Discussion Paper No. 2. Washington, D.C.: World Bank, 1989.
- Lele, Uma and L. Richard Meyers. "Growth and Structural Change in East Africa: Domestic Policies, Agricultural Performance, and World Bank Assistance, 1963-86." MADIA Discussion Paper No. 3. Washington, D.C.: World Bank, 1989.
- Lele, Uma and Steven Stone. "Population Pressure, the Environment, and Agricultural Intensification: Variations on the Boserup Hypothesis." MADIA Discussion Paper No. 4. Washington, D.C.: World Bank, 1989.
- Lele, Uma, Robert Christiansen, and Kundhavi Kadiresan. "Fertilizer Policy in Africa: Lessons from Development Programs and Adjustment Lending, 1970-87." MADIA Discussion Paper No. 5. Washington, D.C.: World Bank, 1989.
- Lele, Uma and Manmohan Agarwal. "Smallholder and Large-Scale Agriculture: Are There Trade-offs in Growth and Equity?" MADIA Discussion Paper No. 6. Washington, D.C.: World Bank, 1989.
- Lele, Uma, Nicolas van de Walle, and Mathurin Gbetibouo. "Cotton in Africa: An Analysis of Differences in Performance." MADIA Discussion Paper No. 7. Washington, D.C.: World Bank, 1989.
- Idachaba, F. S. "State-Federal Relations in Nigerian Agriculture." MADIA Discussion Paper No. 8. Washington, D.C.: World Bank, 1989.
- Lele, Uma. "Structural Adjustment, Agricultural Development, and the Poor: Lessons from the Malawian Experience." MADIA Discussion Paper No. 9. Washington, D.C.: World Bank, 1989.
- Gaviria, Juan, Vishva Bindlish, and Uma Lele. "The Rural Road Question and Nigeria's Agricultural Development." MADIA Discussion Paper No. 10. Washington, D.C.: World Bank, 1989.
- Lele, Uma and Robert Christiansen. "Markets, Marketing Boards, and Cooperatives in Africa: Issues in Adjustment Policy." MADIA Discussion Paper No. 11. Washington, D.C.: World Bank, 1989.
- Jammeh, Sidi, Mathurin Gbetibouo, and Uma Lele. "Building Agricultural Research Capacity in Senegal." MADIA Discussion Paper No. 12. Washington, D.C.: World Bank, 1989.
- Lele, Uma, Mathurin Gbetibouo, and Paul Fishstein. "Planning for Food Security in Africa: Lessons and Policy Implications, 1960-88." MADIA Discussion Paper No. 13. Washington, D.C.: World Bank, 1989.
- Lele, Uma, Bill Kinsey, and Antonia Obeya. "Building Agricultural Research Capacity in Africa: Policy Lessons from the MADIA Countries." MADIA Discussion Paper No. 14. Washington, D.C.: World Bank, 1989.

THE MADIA STUDY

Although many generalizations have been made about the agricultural crisis in Africa, relatively few detailed country and cross-country studies of African agriculture based on systematic data analysis have been conducted. Similarly, although foreign aid has constituted a large part of total government expenditures in Africa for close to fifteen years, there has been little analysis of the role of external assistance or the alleged self-serving objectives of donors. The impetus for the study "Managing Agricultural Development in Africa" (MADIA) was to begin the process of filling this gap and to explain the nature and sources of the agricultural crisis, particularly the extent to which it originated in resource endowments, historical and contemporary events, external and internal policies, and the economic and political environment.

The MADIA study involved detailed analysis of six African countries—Kenya, Malawi, Tanzania, Cameroon, Nigeria, and Senegal. In addition to the World Bank, seven donors, USAID, UKODA, DANIDA, SIDA, the French and German governments, and the EEC participated in the study. The analysis of country policies and performance during the last 20-25 years was carried out with the benefit of substantial input from the governments and nationals of each of the countries represented. The study had three main areas of focus: (1) the relationship between domestic macroeconomic and agricultural policy and agricultural performance, (2) donors' role in the development of agriculture, and (3) the politics of agricultural policy.

The MADIA study was the result of encouragement and support from many people. Anne Krueger, former Vice President for Economic Research Staff in the World Bank, encouraged the establishment of these studies on aid and development in 1984. Gregory Ingram, former Director of the Development Research Department, provided unstinting support for the study. During the reorganization of the World Bank in 1986, the strong support from Benjamin King, then acting Vice President for Economic Research Staff, proved invaluable. Barber Conable, President of the World Bank, and Mr. Edward V. K. Jaycox, Vice President for the Africa Region, have played a key role by ensuring support for the study's completion, as did Stanley Fischer, the Vice President for Development Economics. Yves Rovani, Director General of the Operations Evaluation Department, was particularly helpful as the MADIA study drew heavily on the works of OED.

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